

DRAFT

Intrinsic Remediation Engineering Evaluation/Cost Analysis for the Former AGE Fueling Facility Site

Volume II: Appendices



**Seymour Johnson Air Force Base
Goldsboro, North Carolina**

Prepared For

**Air Force Center for Environmental Excellence
Technology Transfer Division
Brooks Air Force Base
San Antonio, Texas**

and

**Seymour Johnson Air Force Base
North Carolina**

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DRAFT

**INTRINSIC REMEDIATION
ENGINEERING EVALUATION/COST ANALYSIS FOR
THE FORMER AGE FUELING FACILITY SITE
VOLUME II**

**SEYMOUR JOHNSON AIR FORCE BASE
GOLDSBORO, NORTH CAROLINA**

April 1996

Prepared for:

**AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE
TECHNOLOGY TRANSFER DIVISION
BROOKS AIR FORCE BASE
SAN ANTONIO, TEXAS**

AND

**SEYMOUR JOHNSON AIR FORCE BASE
NORTH CAROLINA**

Prepared by:

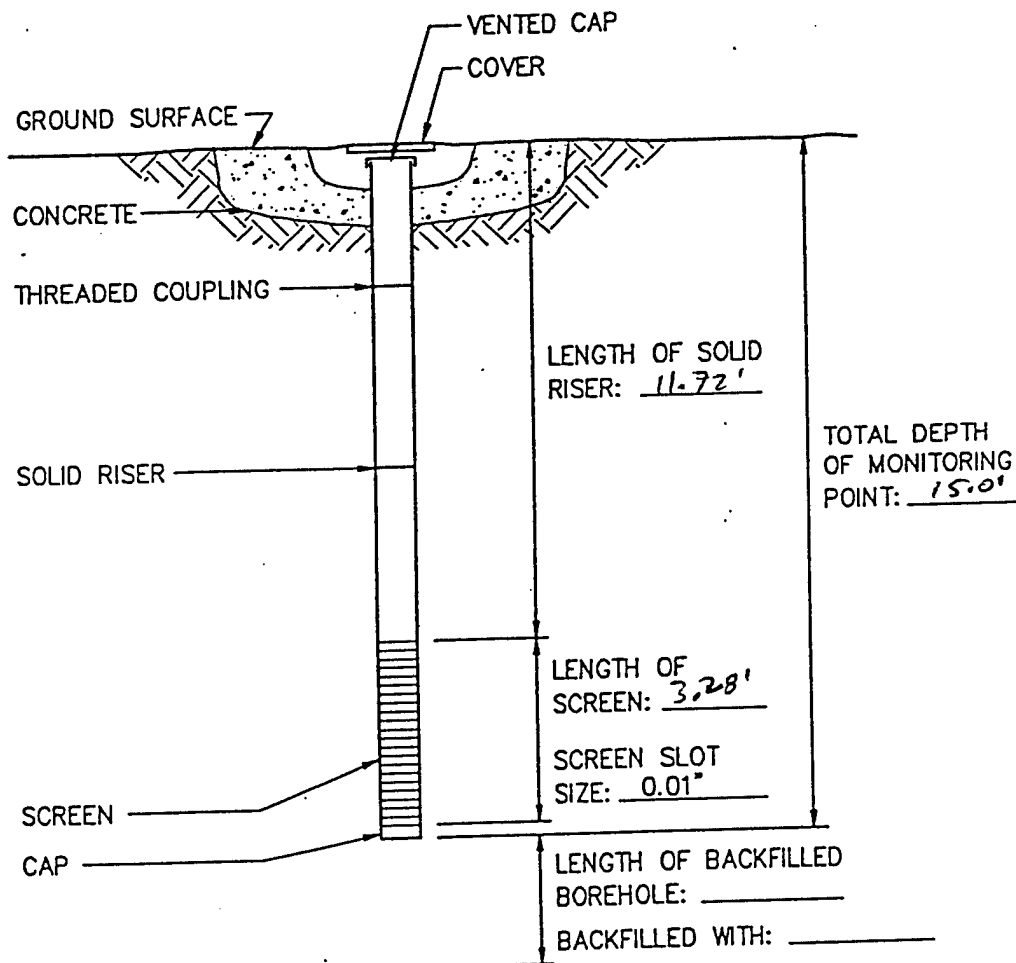
**PARSONS ENGINEERING SCIENCE, INC.
1700 BROADWAY, SUITE 900
DENVER, COLORADO 80290**

APPENDIX A

BORING LOGS AND WELL COMPLETION DIAGRAMS

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER CPT-16
 JOB NUMBER 722450.26 INSTALLATION DATE 1/21/95 LOCATION Bldg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.01"
 RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1.0"
 CONE PENETROMETER CONTRACTOR USACE SCAPS ES REPRESENTATIVE T. Richardson



(NOT TO SCALE)

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC



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Cary, North Carolina

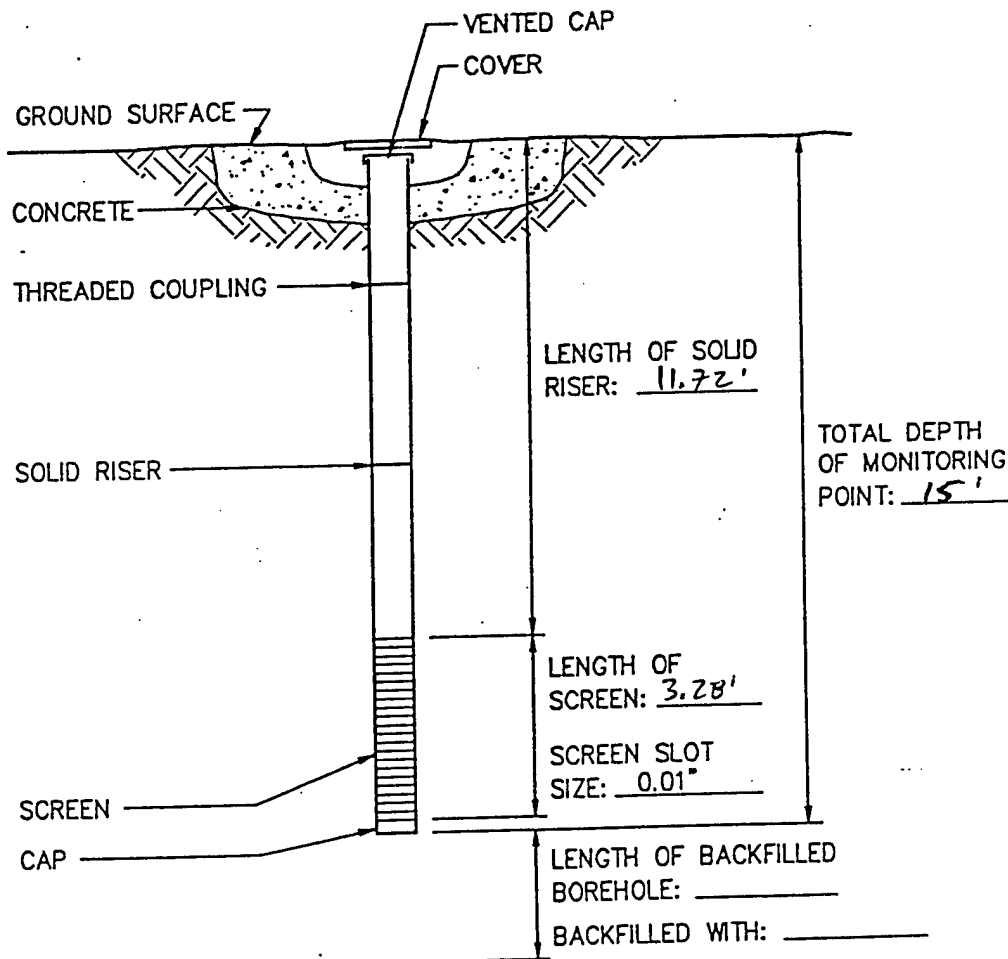
STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.

GROUND SURFACE _____ FEET

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER CPT-17
 JOB NUMBER 722450.26 INSTALLATION DATE 1/21/95 LOCATION Bldg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.01"
 RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1.0"
 CONE PENETROMETER CONTRACTOR USACE SCAPS ES REPRESENTATIVE T. Richardson



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET
BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC

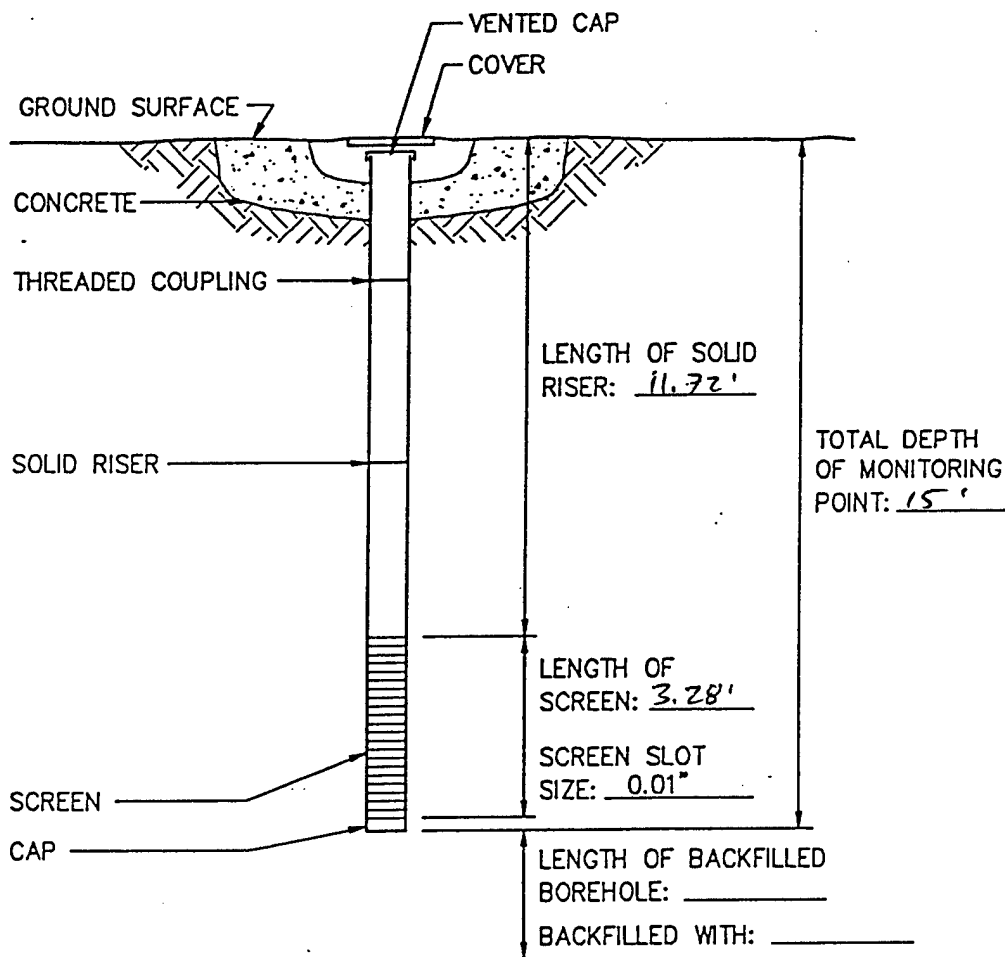


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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER CPT-18
 JOB NUMBER 722450.26 INSTALLATION DATE 1/21/95 LOCATION B/Lg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.01"
 RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1.0"
 CONE PENETROMETER CONTRACTOR USACE SCAPS ES REPRESENTATIVE T. Richardson



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.
 TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.
 GROUND SURFACE _____ FEET

FIGURE 3.4

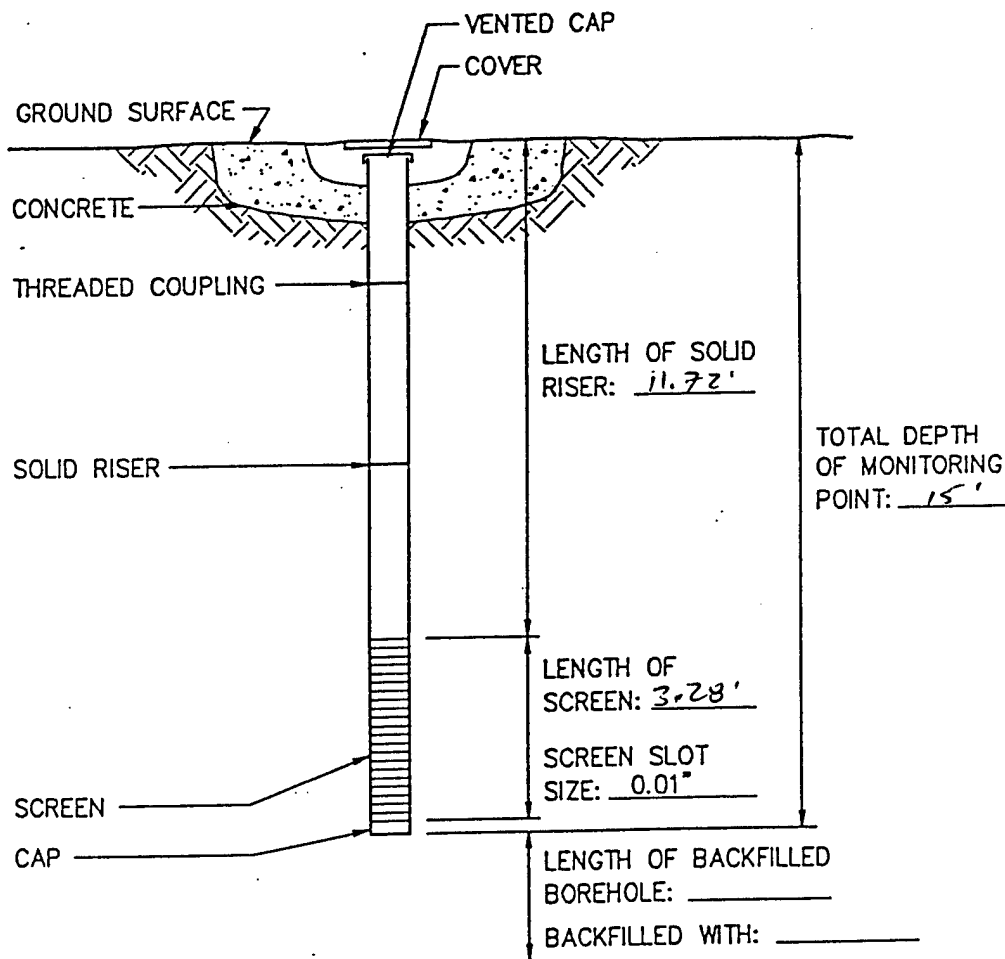
MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC

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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER CPT-19
 JOB NUMBER 722450.26 INSTALLATION DATE 1/21/95 LOCATION Bldg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.01"
 RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1.0"
 CONE PENETROMETER CONTRACTOR USACE SCAPS ES REPRESENTATIVE T. Richardson



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.
 TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.
 GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC

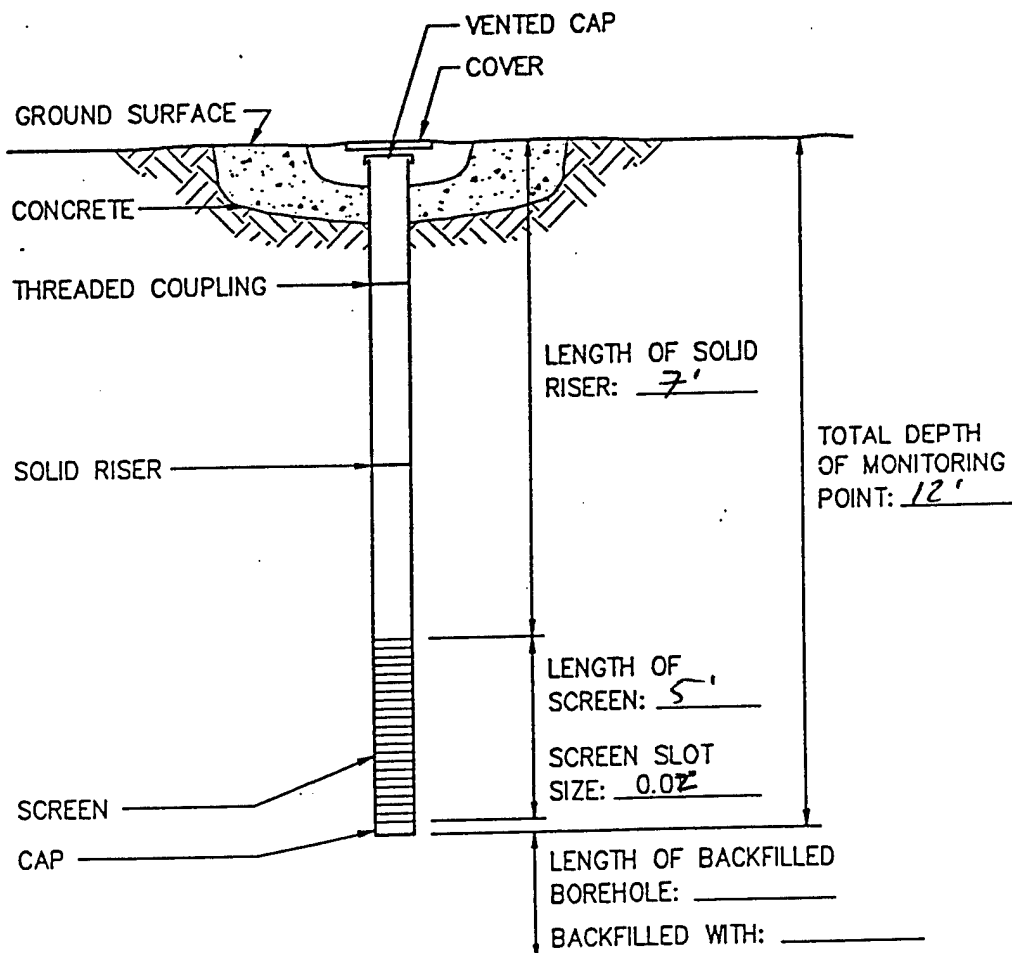


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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-2
 JOB NUMBER 722450.26 INSTALLATION DATE 4/11/95 LOCATION Bldg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 1" PVC SLOT SIZE 0.02"
 RISER DIAMETER & MATERIAL 1" PVC BOREHOLE DIAMETER 2"
 CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC

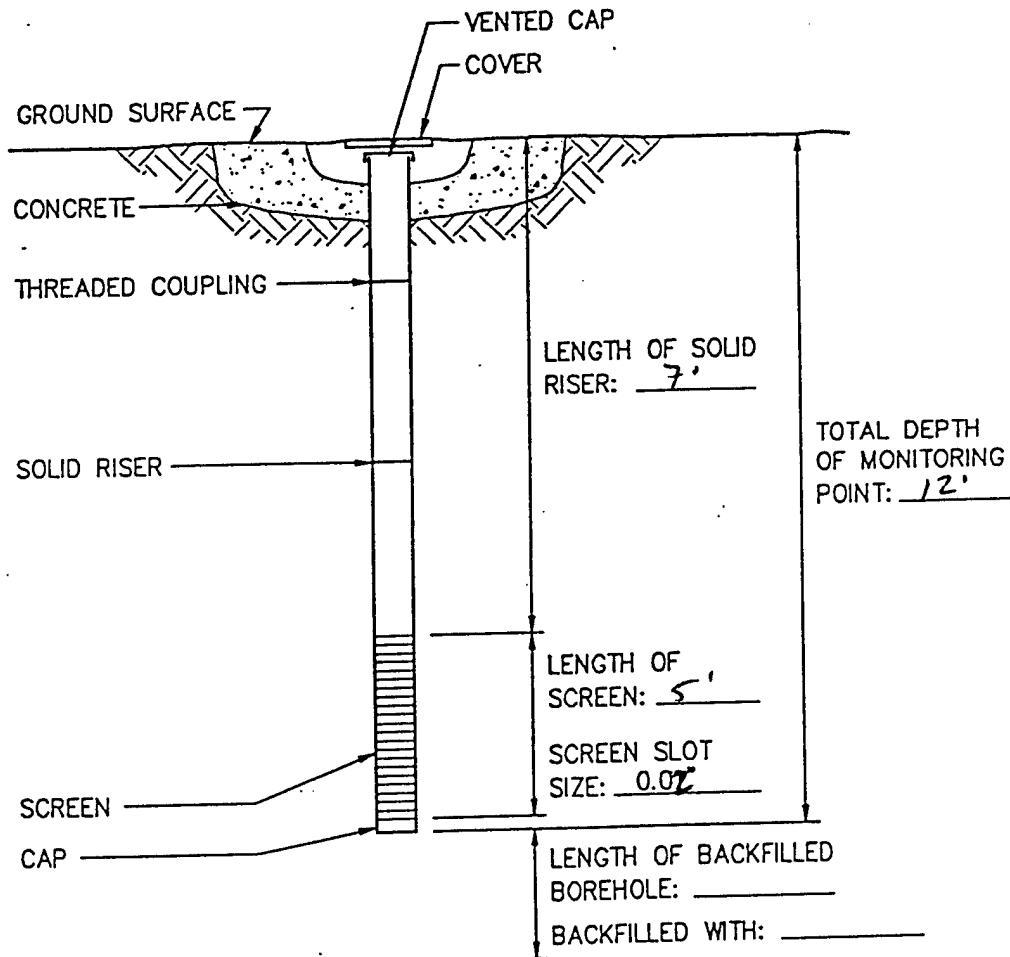


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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-3
 JOB NUMBER 722450.26 INSTALLATION DATE 4/11/95 LOCATION B16 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 1" PVC SLOT SIZE 0.02"
 RISER DIAMETER & MATERIAL 1" PVC BOREHOLE DIAMETER 2"
 CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.
 TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.
 GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC

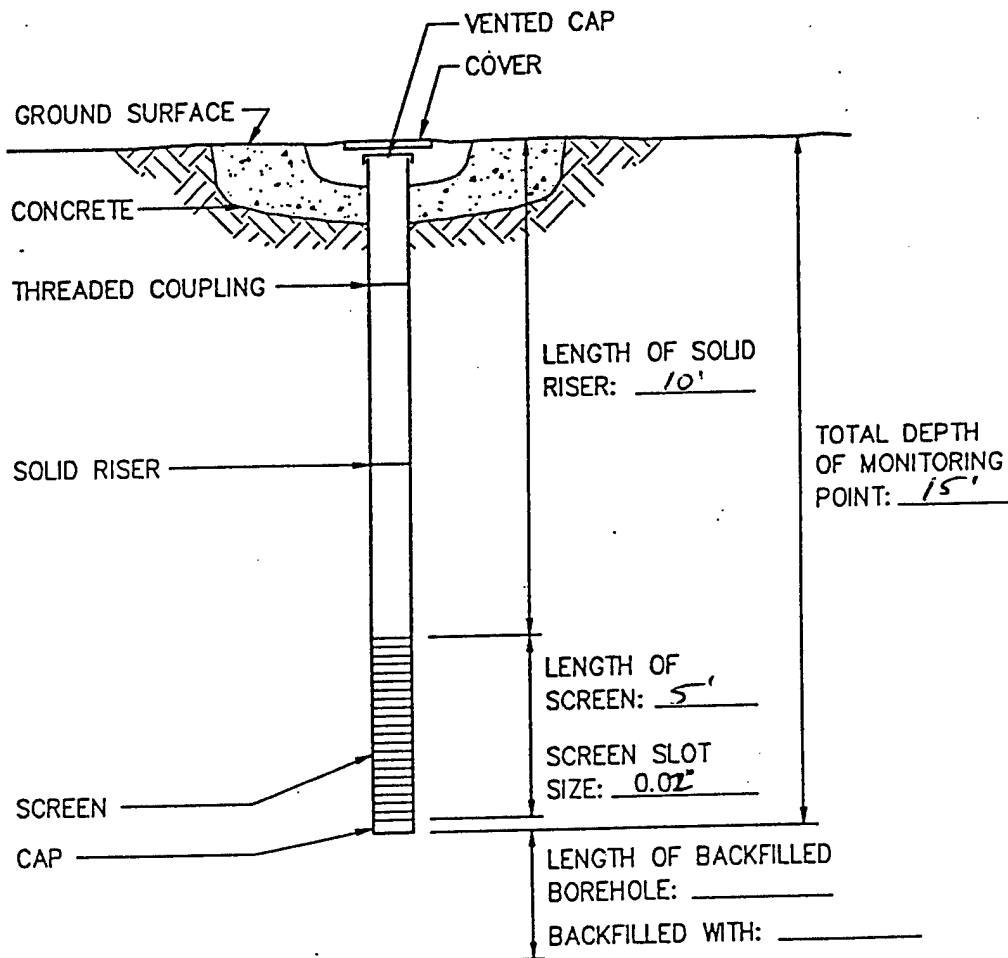


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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-4
JOB NUMBER 722450.26 INSTALLATION DATE _____ LOCATION Bldg 4715
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
DATUM FOR WATER LEVEL MEASUREMENT _____
SCREEN DIAMETER & MATERIAL 1" PVC SLOT SIZE 0.02"
RISER DIAMETER & MATERIAL 1" PVC BOREHOLE DIAMETER 2"
CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET
BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

**Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC**



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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-5
 JOB NUMBER 722450.26 INSTALLATION DATE 4/11/95 LOCATION BLG 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"
 RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"
 CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKR

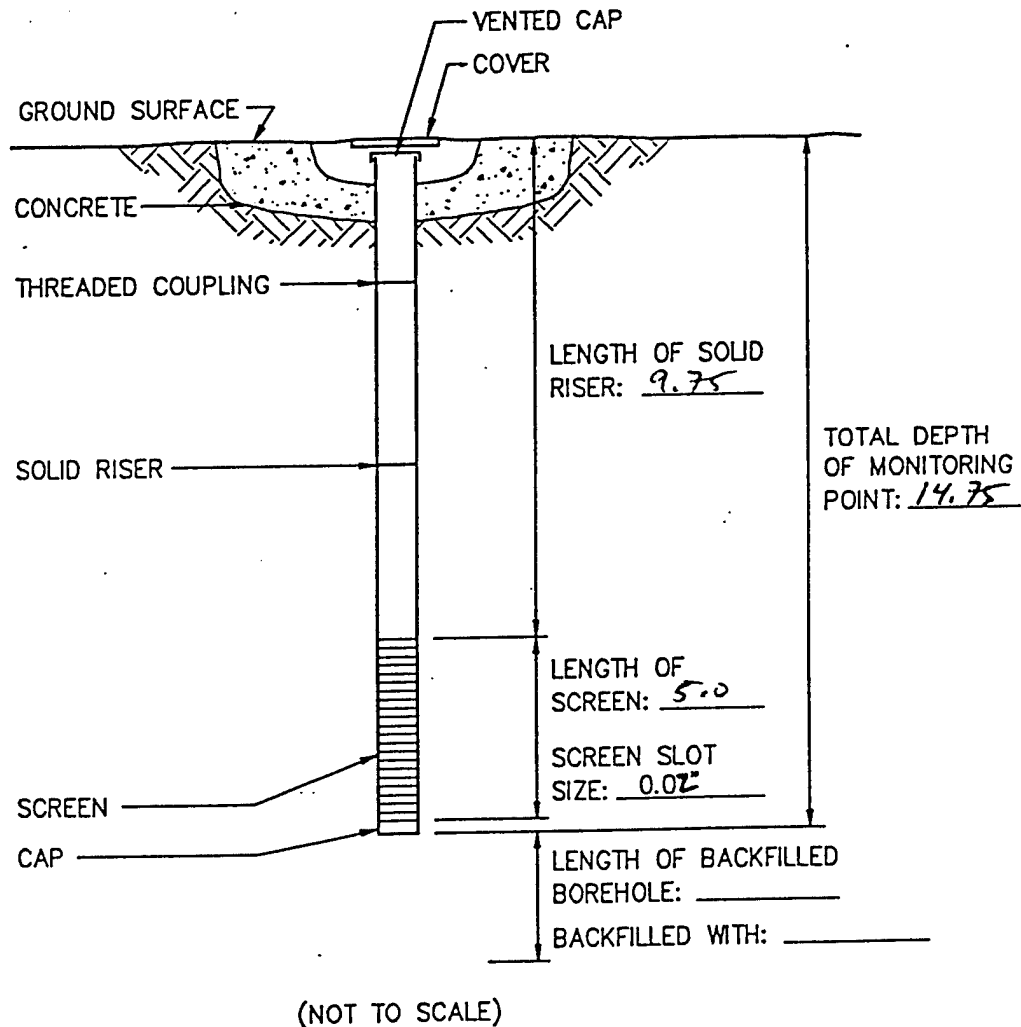


FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC

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Cary, North Carolina

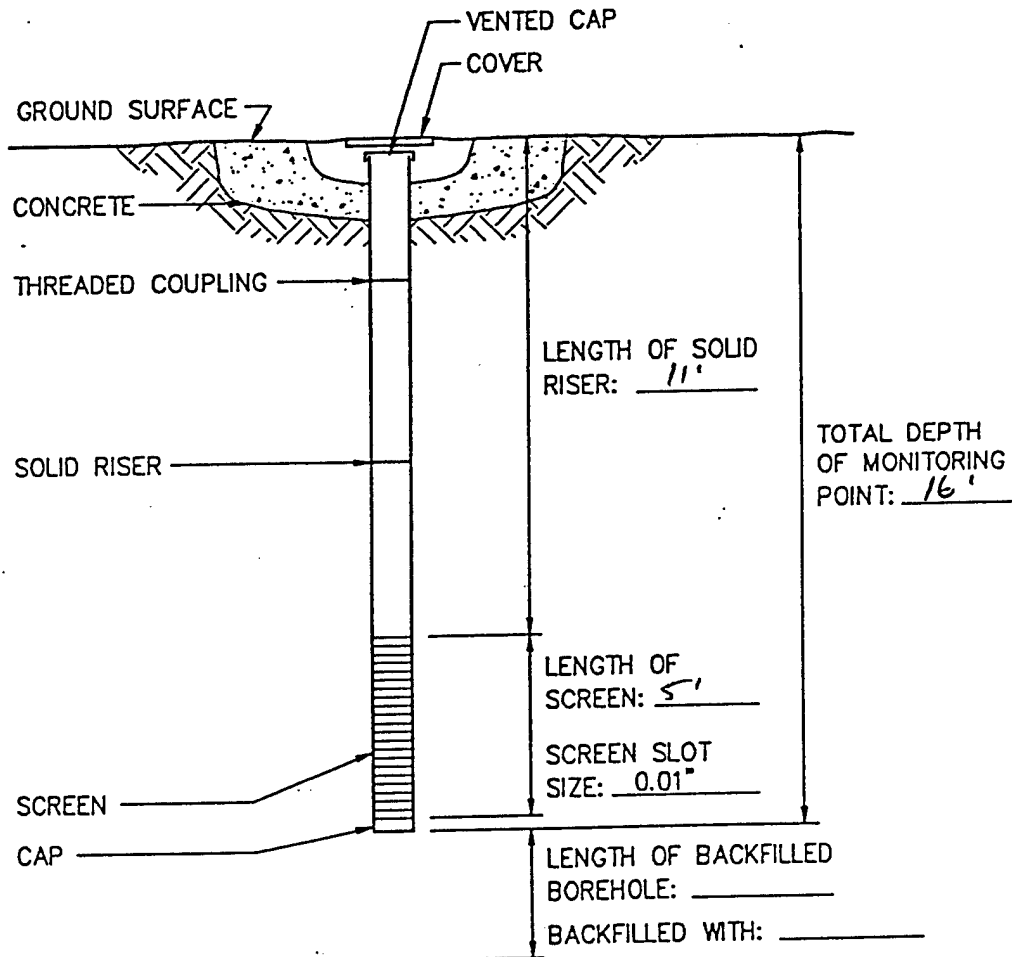
STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.

GROUND SURFACE _____ FEET

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-6
 JOB NUMBER 722450.26 INSTALLATION DATE 4/12/95 LOCATION Bldg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"
 RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"
 CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC



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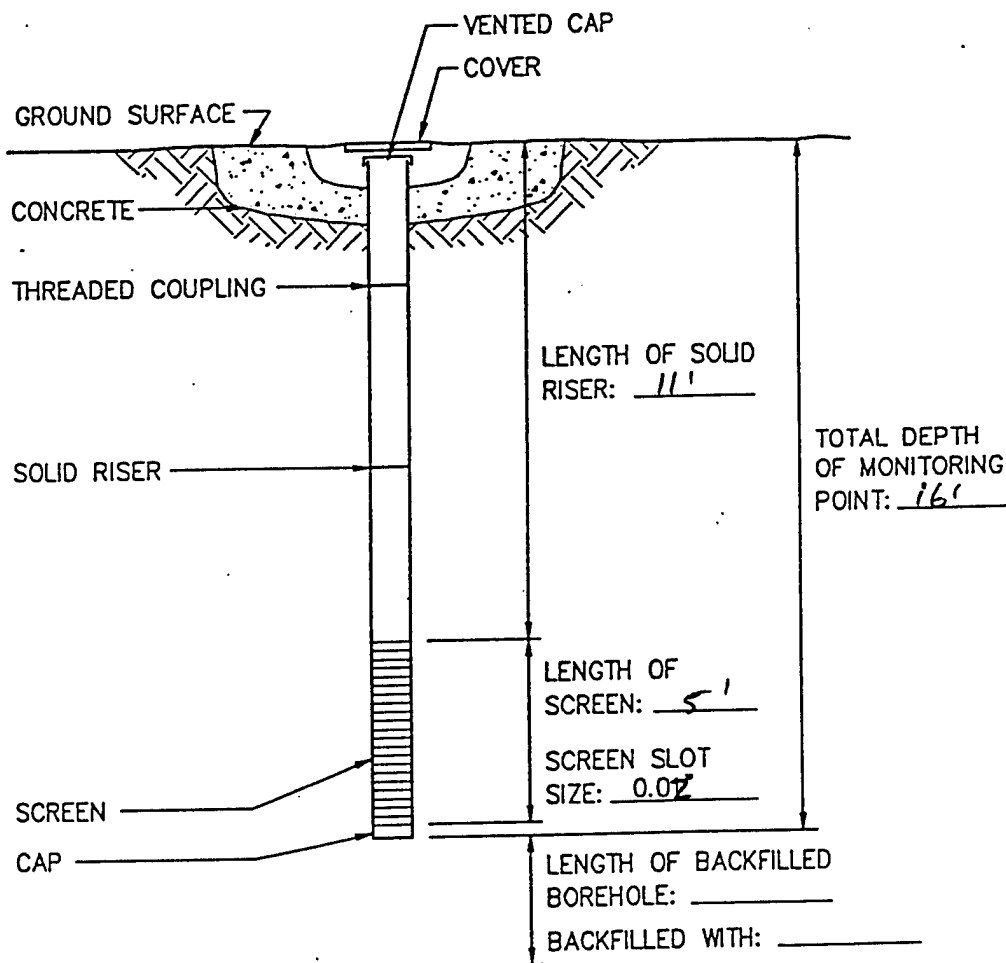
STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.

GROUND SURFACE _____ FEET

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-7
 JOB NUMBER 722450.26 INSTALLATION DATE 4/12/95 LOCATION Bldg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"
 RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"
 CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TLR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.
 TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.
 GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC

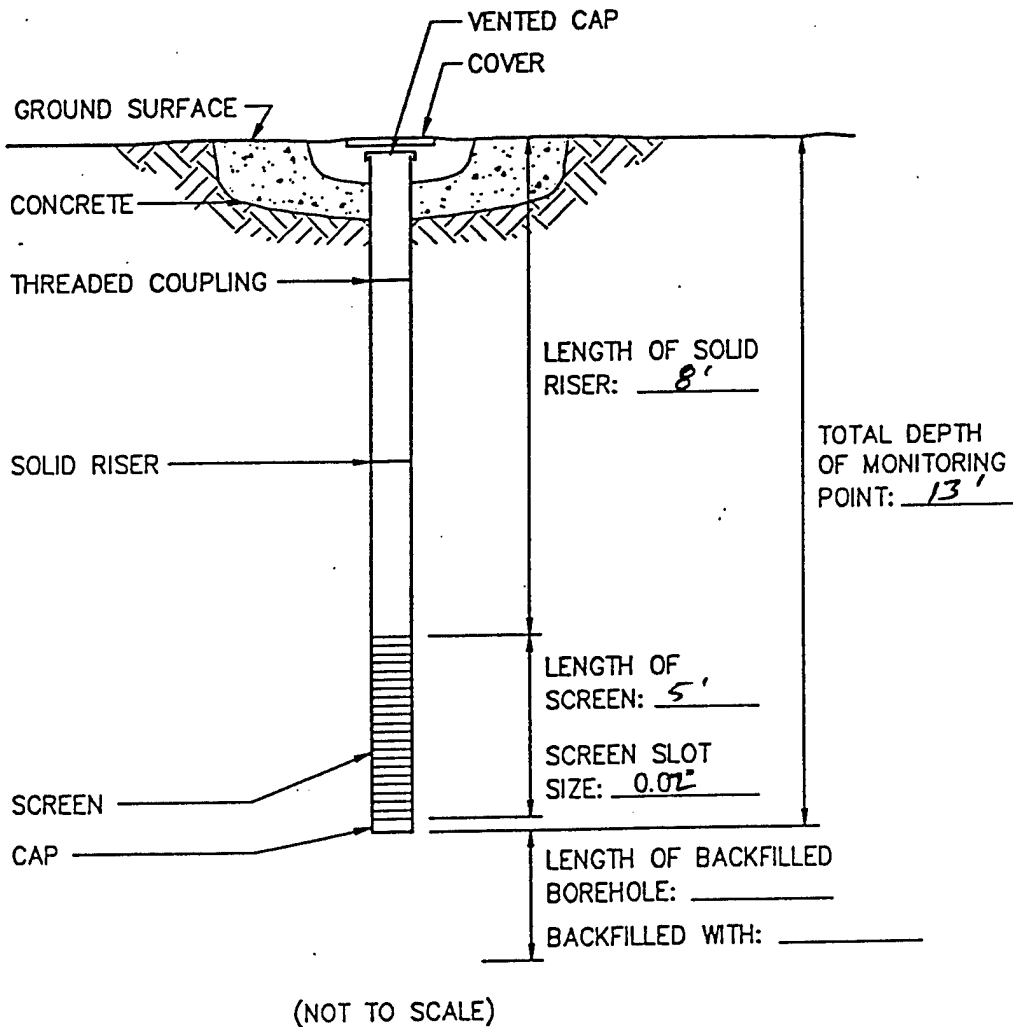


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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-8
JOB NUMBER 722450.26 INSTALLATION DATE 4/12/95 LOCATION BLG 4715
DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
DATUM FOR WATER LEVEL MEASUREMENT _____
SCREEN DIAMETER & MATERIAL 1" PVC SLOT SIZE 0.02"
RISER DIAMETER & MATERIAL 1" PVC BOREHOLE DIAMETER 2"
CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TLR, MKB



STABILIZED WATER LEVEL _____ FEET
BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET
BELOW DATUM.

GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

**Intrinsic Remediation EE/CA
Former AGE Fuel Facility
Seymour Johnson AFB, NC**

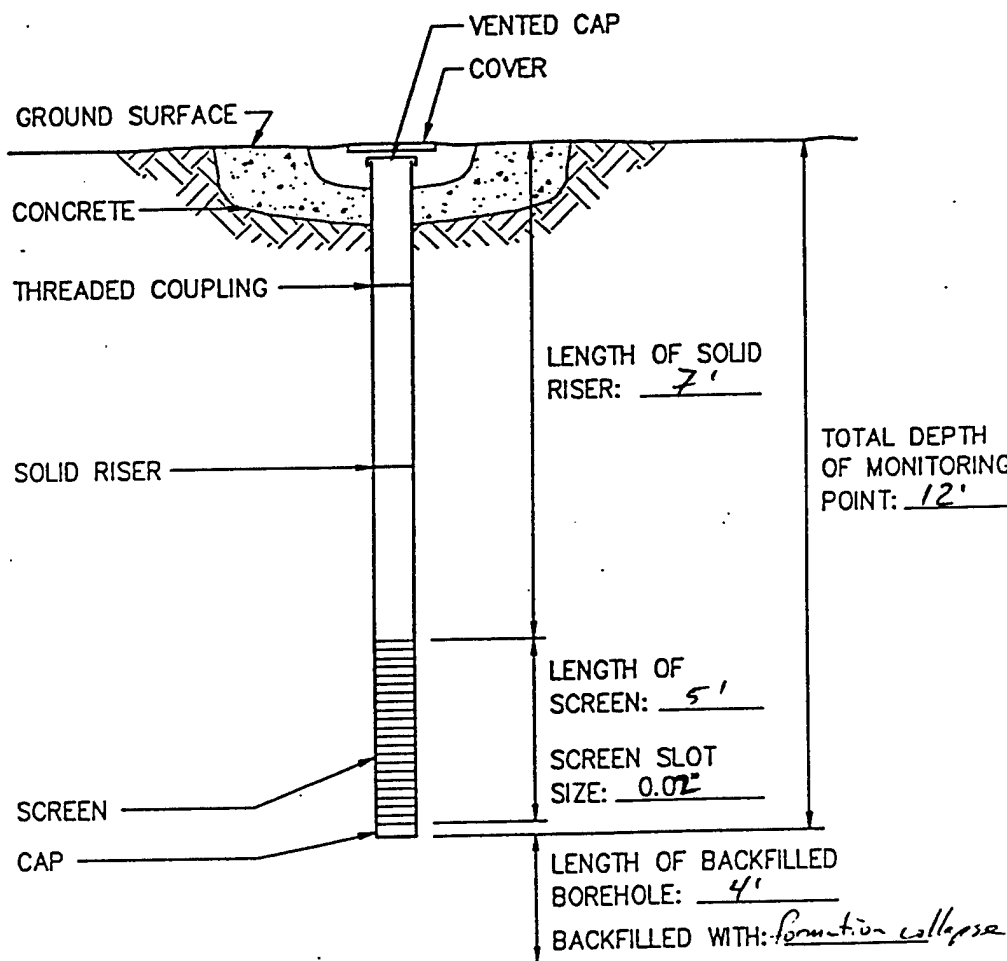


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Cary, North Carolina

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-9
 JOB NUMBER 722450.26 INSTALLATION DATE 4/12/95 LOCATION Bldg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"
 RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"
 CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.
 TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.
 GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC

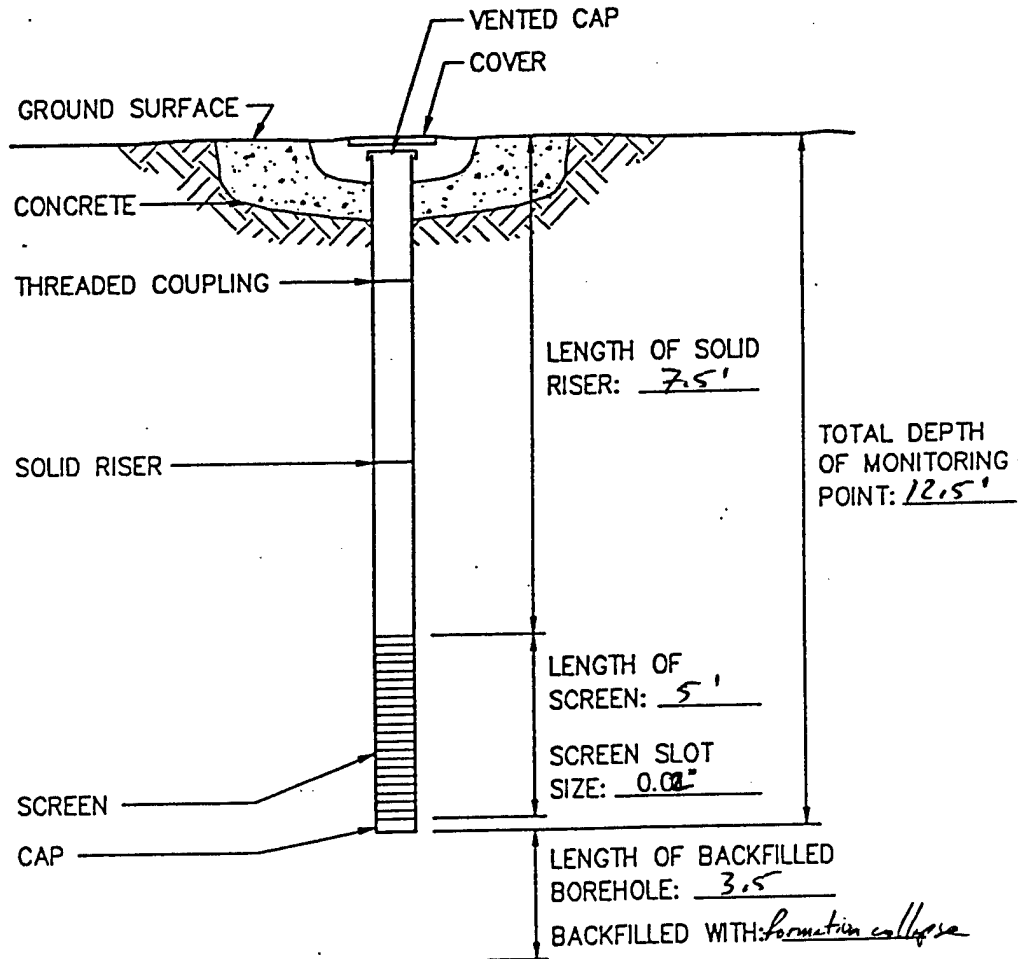


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MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-10
 JOB NUMBER 722450.26 INSTALLATION DATE 4/12/95 LOCATION 314 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"
 RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"
 CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TJR, MKB



(NOT TO SCALE)

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC



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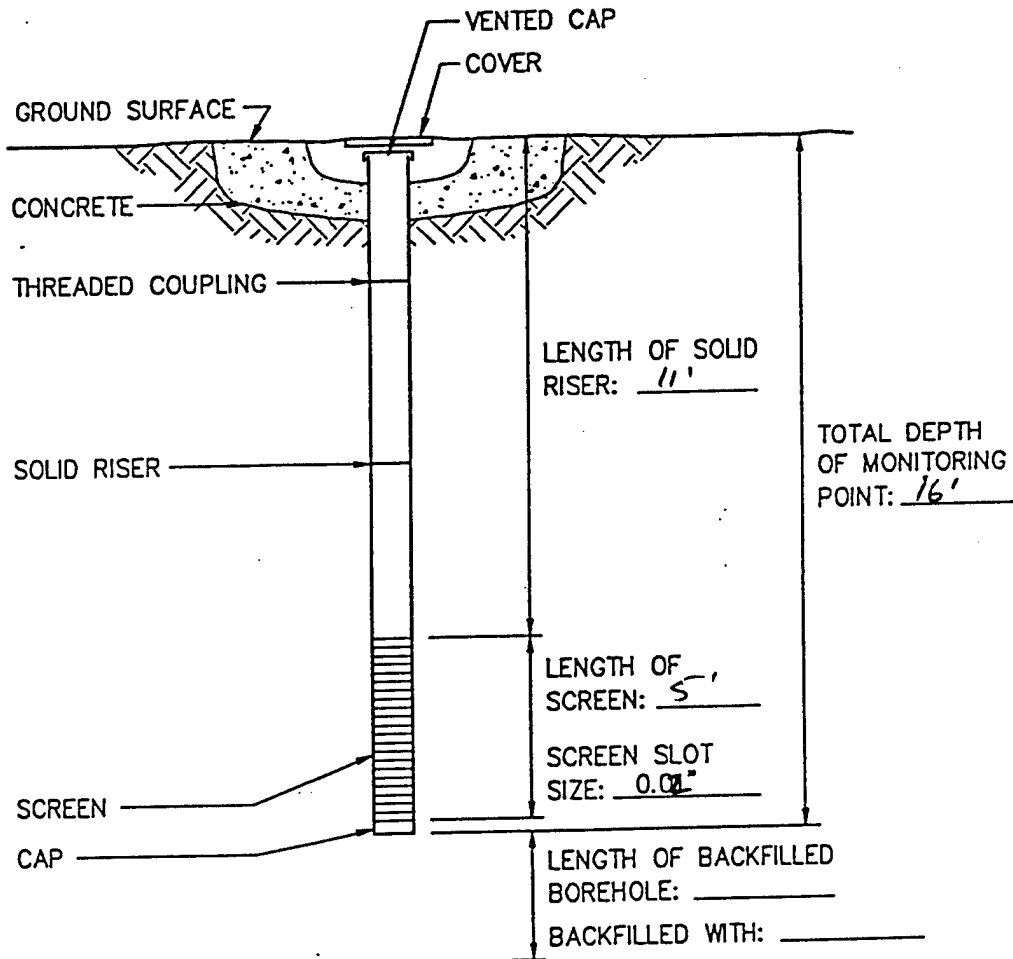
STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.

GROUND SURFACE _____ FEET

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-11
 JOB NUMBER 722450.26 INSTALLATION DATE 4/13/95 LOCATION Bldg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 0.5" PVC SLOT SIZE 0.02"
 RISER DIAMETER & MATERIAL 0.5" PVC BOREHOLE DIAMETER 1"
 CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.
 TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.
 GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC

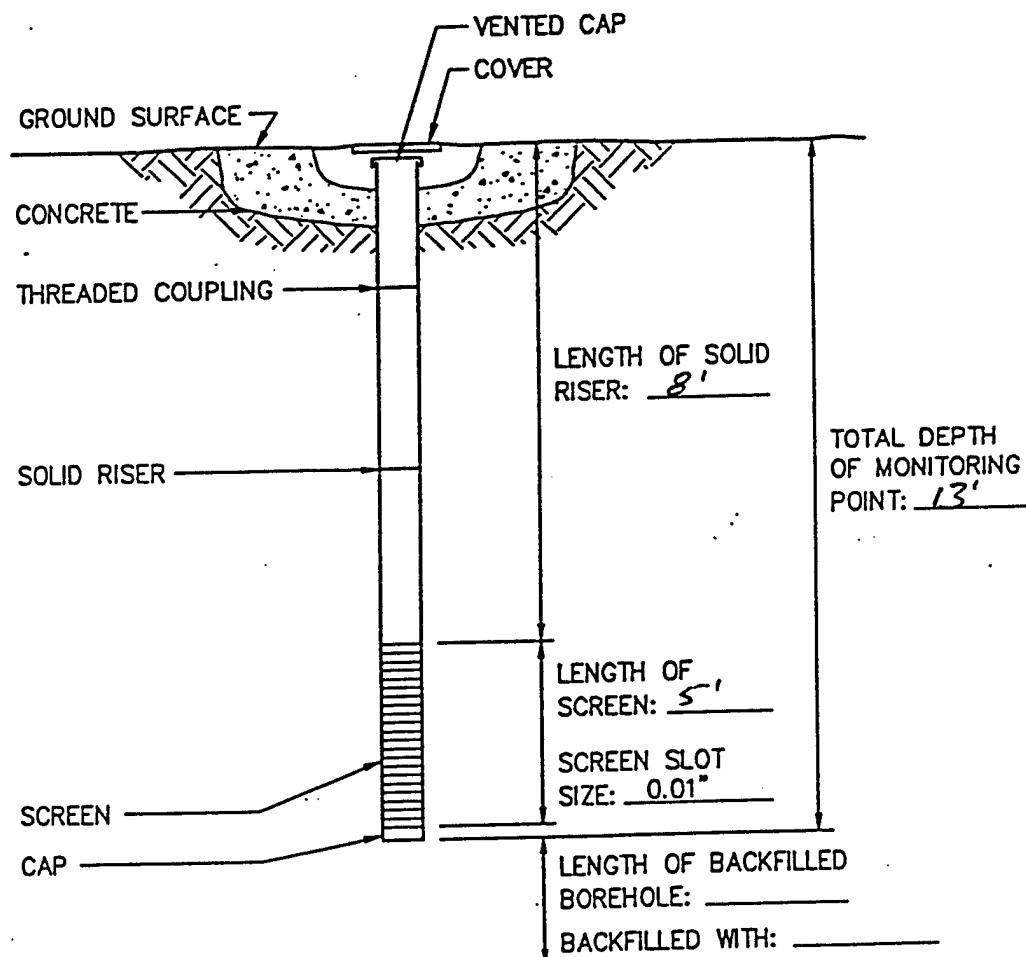


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Cary, North Carolina

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-12
 JOB NUMBER 722450.26 INSTALLATION DATE 4/19/95 LOCATION Bldg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 2" PVC SLOT SIZE 0.01"
 RISER DIAMETER & MATERIAL 2" PVC BOREHOLE DIAMETER 3"
 CONE PENETROMETER CONTRACTOR hand auger ES REPRESENTATIVE TLR, MKB



(NOT TO SCALE)

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC



**PARSONS
ENGINEERING SCIENCE, INC.**

Cary, North Carolina

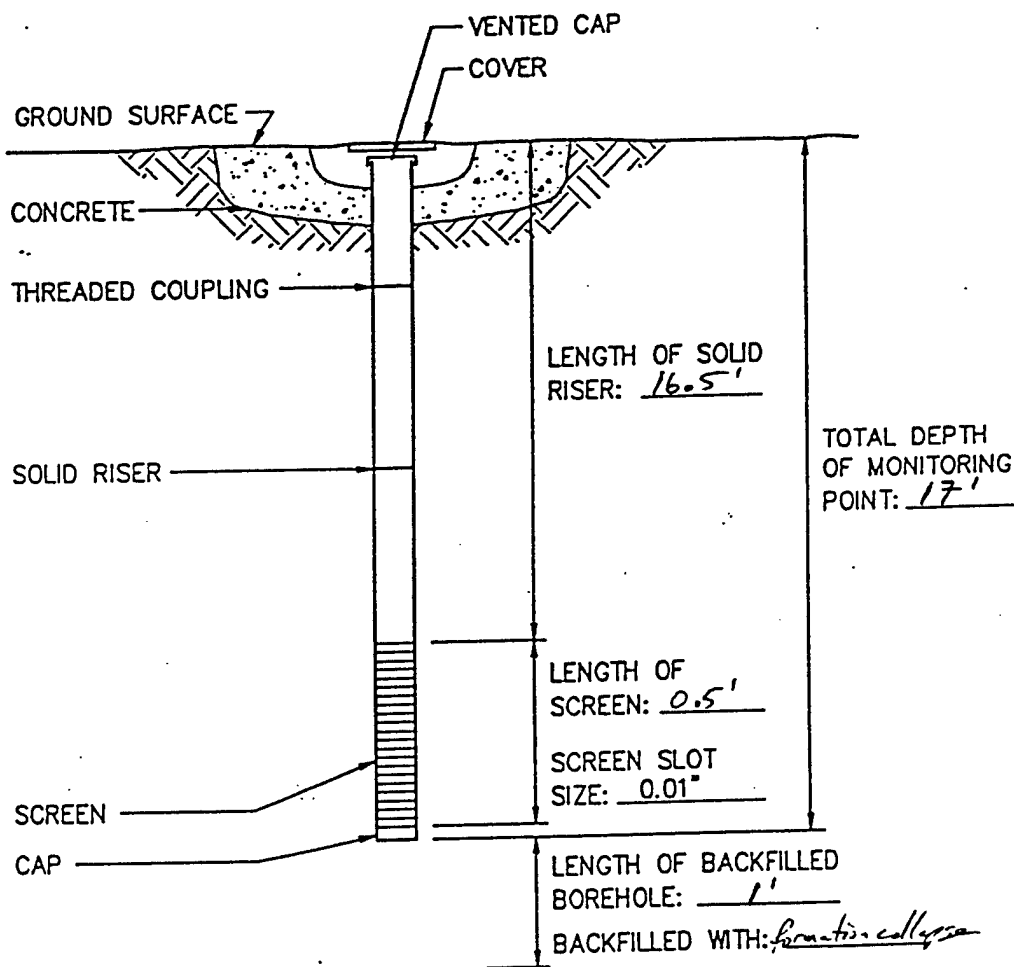
STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.

GROUND SURFACE _____ FEET

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-12D
 JOB NUMBER 722450.26 INSTALLATION DATE 4/13/95 LOCATION Bldg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 0.5" stainless steel SLOT SIZE _____
 RISER DIAMETER & MATERIAL 0.375" polyethylene BOREHOLE DIAMETER 0.5"
 CONE PENETROMETER CONTRACTOR Geoprobe ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.
 TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.
 GROUND SURFACE _____ FEET

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC

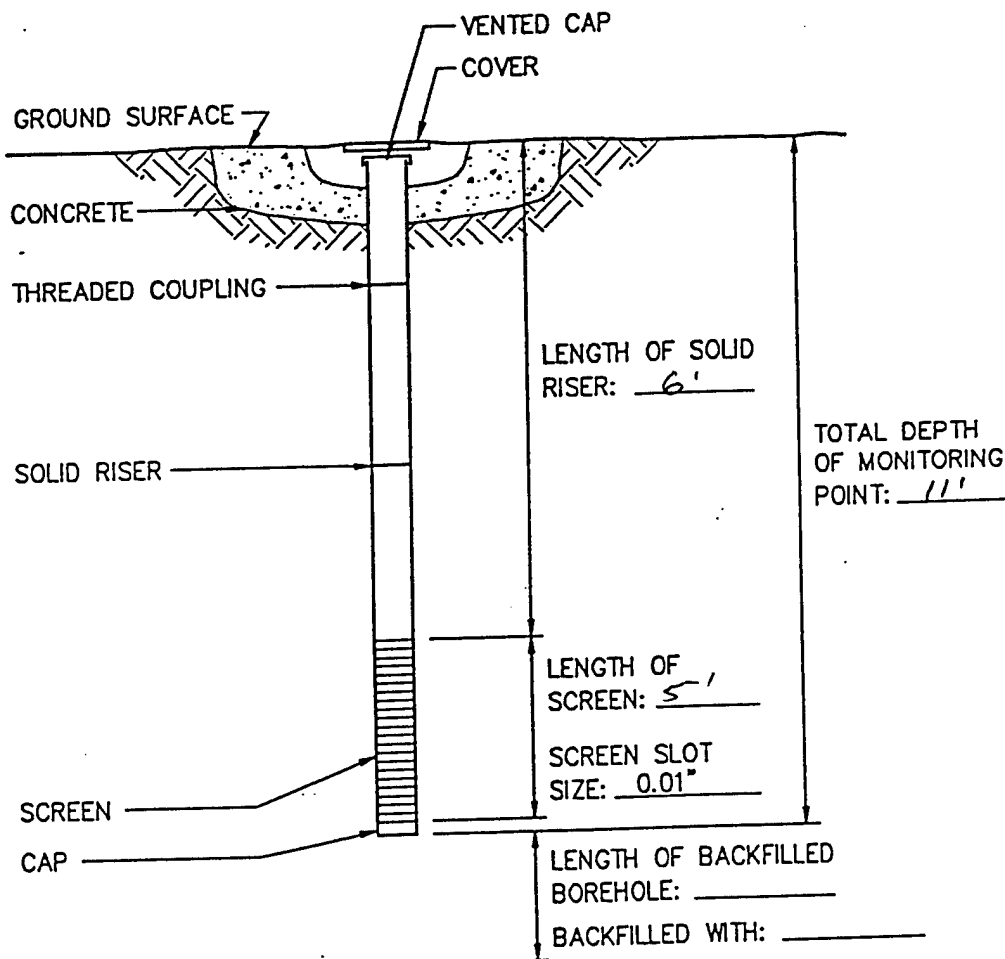


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Cary, North Carolina

MONITORING POINT INSTALLATION RECORD

JOB NAME SEYMOUR JOHNSON AIR FORCE BASE MONITORING POINT NUMBER MW-13
 JOB NUMBER 722450.26 INSTALLATION DATE 4/17/95 LOCATION Bldg 4715
 DATUM ELEVATION _____ GROUND SURFACE ELEVATION _____
 DATUM FOR WATER LEVEL MEASUREMENT _____
 SCREEN DIAMETER & MATERIAL 2" PVC SLOT SIZE 0.01"
 RISER DIAMETER & MATERIAL 2" PVC BOREHOLE DIAMETER 3"
 CONE PENETROMETER CONTRACTOR Hand Auger ES REPRESENTATIVE TCR, MKB



(NOT TO SCALE)

FIGURE 3.4

MONITORING POINT INSTALLATION RECORD

Intrinsic Remediation EE/CA
 Former AGE Fuel Facility
 Seymour Johnson AFB, NC



PARSONS ENGINEERING SCIENCE, INC.

Cary, North Carolina

STABILIZED WATER LEVEL _____ FEET
 BELOW DATUM.

TOTAL MONITORING POINT DEPTH _____ FEET
 BELOW DATUM.

GROUND SURFACE _____ FEET

APPENDIX B

SOIL AND GROUNDWATER ANALYTICAL DATA



Evergreen

July 20, 1995

MR TODD WIEDEMEIER
PARSONS ENGINEERING SCIENCE INC
1700 BROADWAY SUITE 900
DENVER CO 80290

Data Reports : 95-2193
Client Project : 722450.26
Seymour Johnson

Dear Mr. Wiedemeier:

Enclosed are the analytical results for the samples shown in the Sample Log Sheet. The enclosed data have been reviewed for quality assurance. If you have any questions concerning the reported information, please contact Patty McClellan, Program Manager, or me.

Please Note: Samples marked for return on the Sample Log Sheet are considered hazardous, unsuitable for municipal disposal or were placed on hold at your request. Samples considered hazardous or unsuitable for municipal disposal will be returned to you immediately. Samples placed on hold will be returned and samples not considered hazardous will be disposed of one (1) month from the date of this letter.

The invoice for this work will be mailed to your Accounts Payable department shortly.

Thank you for using the services of Evergreen Analytical.

Sincerely,

Jack Barney
President

TM



CASE NARRATIVE

Evergreen Analytical Laboratory (EAL) Project: 95-2193

Parsons Engineering Science, Inc. (PES) Project: Seymour Johnson AFB
722450.26

Sample Receipt

Nine groundwater samples were received on July 11, 1995 at EAL for analysis under Subcontract 722450.SC02. Refer to the EAL Check-in Record for specific information regarding the condition of samples upon receipt. Refer to the EAL Sample Log Sheet for specific log-in information and cross-reference of EAL and PES sample identifications.

BTEX, Trimethylbenzenes, Tetramethylbenzene, Chlorobenzene, Method SW8020

1,3,5-Trimethylbenzene was detected in Method Blank MB1071295 at less than two times the reliable detection limit (RDL). The associated sample has been "B" flagged.

There are no other quality control anomalies to report.

Total Volatile Hydrocarbons (TVH), Method 8015M

There are no quality control anomalies to report.

Total Extractable Hydrocarbons (TEH), Method 8015M

There are no quality control anomalies to report.

Methane, Method RSKSOP-175

There are no quality control anomalies to report.


Anions, Method EPA 300.0

There are no quality control anomalies to report.

Disk Deliverables

The disk deliverables are included with the hard copy package. Matrix spike, matrix spike duplicate and laboratory duplicate samples are not included on the disk. Please note that blank spaces in the laboratory detection limit and/or practical quantitation limit (PQL) column indicate that there is no detection limit or PQL for that analyte.

A hard copy the spreadsheet is included.



Patricia A. McClellan, Program Manager

Evergreen Analytical Sample Log Sheet

Project # 95-2193

Date(s) Sampled: 07/10/95 COC

Date Due: 07/18/95-UST
07/25/95-ANIONS

Sample Received: 07/11/95 0920

Holding Time(s): 07/12-NO2,NO3
07/17-TEH;07/24-BTEX,TVH
Rush STANDARD

Client Project I.D. 722450.26

Client: PARSONS ENGINEERING SCIENCE
Address: 1700 BROADWAY, SUITE 900
DENVER, CO 80290
Contact: TODD WIEDEMEIER
Client P.O. _____
Phone #831-8100 Fax #831-8208

Shipping Charges N/A
E.A. Cooler # 475
Airbill # FED EX 6475871920
Custody Seal Intact? N/A
Cooler _____ Bottles _____
COC Present Y
Sample Tags Present? Y
Sample Tags Listed? Y
Sample(s) Sealed? Y

Special Invoicing/Billing _____

Special Instructions ✓ 1 SAMPLE BROKEN IN TRANSIT. ★ ALL BTEX ARE TO INCLUDE
CHLOROBENZENE, TMB AND TEMB.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
8735A-C	MW-16	★ BTEX	W	40V	2
X08736A-C	MW-17	★ BTEX	W	40V	2
X08737A-C	MW-15	★ BTEX	W	40V	2
X08738A-C	MW-14	★ BTEX	W	40V	2
X08739A-C	MW-19	★ BTEX	W	40V	2
X08740A-C	MW-18	★ BTEX	W	40V	2
X08741A-C	MW-20	★ BTEX	W	40V	2
X08742A-C	MW-21	★ BTEX	W	40V	2
X08743A-C	TRIP BLANK	★ BTEX	W	40V	2
X08735D-F	MW-16	TVH	W	40V	2
X08736D-F	MW-17	TVH	W	40V	2
X08737D-F	MW-15	TVH	W	40V	2
X08738D-F	MW-14	TVH	W	40V	2
X08739D-F	MW-19	TVH	W	40V	2
X08740D-F	MW-18	TVH	W	40V	2

R = Samples to be returned

Route GC/MS _____ GC 5 Metals _____ Wet Chem 1 SxPrep 1 Acctg 1

SxRec C QA/QC C Sales C File Orig

Custodian/Date: Jo 7/11/95
Jim 7/11/95

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X08741D/E	MW-20	✓ TVH	W	40V	2
08735G-I	MW-16	METHANE	W	40V	2
X08736G-I	MW-17	METHANE	W	40V	2
X08737G-I	MW-15	METHANE	W	40V	2
X08738G-I	MW-14	METHANE	W	40V	2
X08739G-I	MW-19	METHANE	W	40V	2
X08740G-I	MW-18	METHANE	W	40V	2
X08741G-I	MW-20	METHANE	W	40V	2
X08735J	MW-16	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
X08736J	MW-17	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
X08737J	MW-15	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
X08738J	MW-14	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
X08739J	MW-19	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
X08740J	MW-18	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
X08741J	MW-20	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
X08735K	MW-16	TEH	W	1LA	C3
X08736K	MW-17	TEH	W	1LA	C3
X08737K	MW-15	TEH	W	1LA	C3
3738K	MW-14	TEH	W	1LA	C3
X08739K	MW-19	TEH	W	1LA	C3
X08740K	MW-18	TEH	W	1LA	C3
X08741K	MW-20	TEH	W	1LA	C3

Page 2 of 2 Pages

Project # 94-2193

R=Sample to be returned

Date & Time Rec'd: 7/11/95 0920 Shipped Via: Fed ex

Client : Parsons E.S. (Airbill # if applicable)

Client Project ID(s): 722450.26

EAL Project #(s): 95- 2193 EAL Cooler(s): (Y) N

Cooler# 475

Ice packs (Y) N Y N Y N Y N Y N

Temperature °C 7°

	Y	N	N/A
1. Custody seal(s) present:		<input checked="" type="checkbox"/>	
Seals on cooler intact			<input checked="" type="checkbox"/>
Seals on bottle intact			<input checked="" type="checkbox"/>
2. Chain of Custody present:	<input checked="" type="checkbox"/>		
3. Containers broken or leaking:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
(Comment on COC if Y) <u>COC</u>			
4. Containers labeled:	<input checked="" type="checkbox"/>		
5. COC agrees w/ bottles received:	<input checked="" type="checkbox"/>		
(Comment on COC if N)			
6. COC agrees w/ labels:	<input checked="" type="checkbox"/>		
(Comment on COC if N)			
7. Headspace in VOA vials-waters only		<input checked="" type="checkbox"/>	
(comment on COC if Y)			
8. VOA samples preserved:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
9. pH measured on metals, cyanide or phenolics*:			<input checked="" type="checkbox"/>
List discrepancies _____			
*Non-EAL provided containers only, water samples only.			<input checked="" type="checkbox"/>
10. Metal samples present:			
Total _____, Dissolved _____			
D or PD to be filtered:			
T,TR,D,PD to be Preserved:			
11. Short holding times:	<input checked="" type="checkbox"/>		
Specify parameters <u>Anions- NO₂, NO₃</u>			
12. Multi-phase sample(s) present:		<input checked="" type="checkbox"/>	
13. COC signed w/ date/time:	<input checked="" type="checkbox"/>		

Comments: One TVH vial was rec'd broken for MW-20 pm 7/11/95

(Additional comments on back)
Custodian Signature/Date: Trina Woods 7/11/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB1071195
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project No. : 722450.26
Lab Project No. : 95-2193
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX1071112

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		94%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

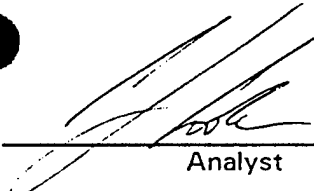
E = Extrapolated value.

U = Compound analyzed for, but not detected.

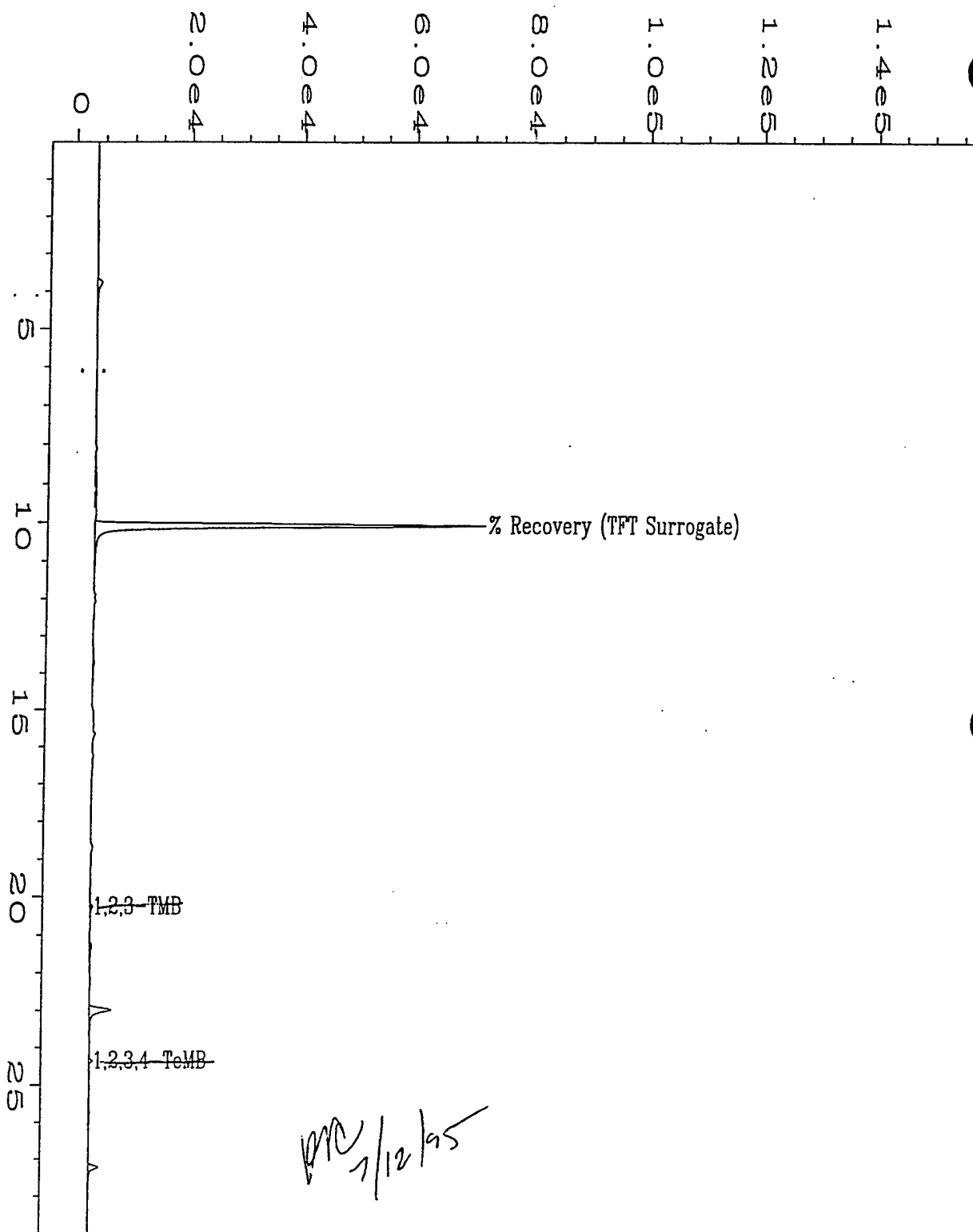
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10711\012F0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 12
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: MB1071195	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX10711.MT
quired on	: 11 Jul 95 06:30 PM	Analysis Method	: BX10711.MT
port Created on:	12 Jul 95 11:59 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 08:44 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB1071295
Date Prepared : 7/12/95
Date Analyzed : 7/12/95

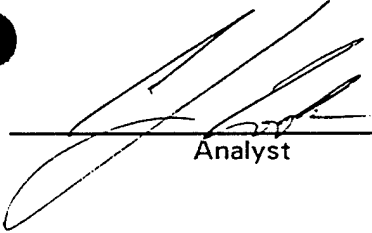
Client Project No. : 722450.26
Lab Project No. : 95-2193
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX1071210

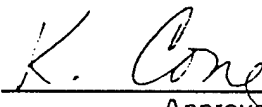
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	0.9	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		93%	70%-130% (QC limits)

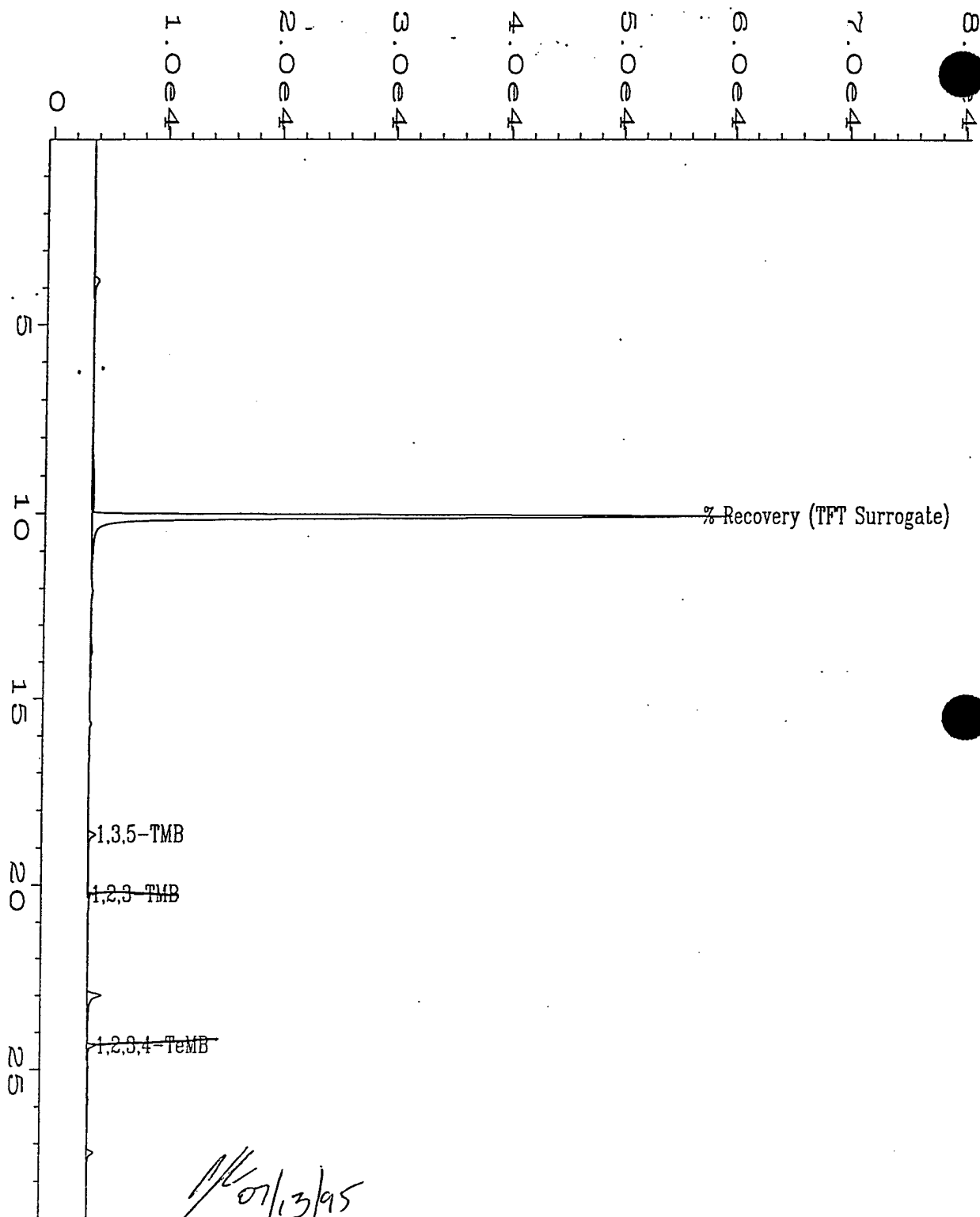
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10712\010F0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: MB1071295	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX10712.M
Required on	: 12 Jul 95 05:53 PM	Analysis Method	: BX10712.M
Report Created on	: 13 Jul 95 10:33 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 04:18 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

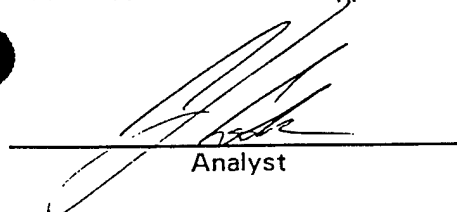
Client Sample Number	: MW-16	Client Project No.	: 722450.26
Lab Sample Number	: X08735	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071113
		Method Blank No.	: MB1071195

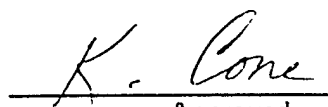
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		96%	70%-130% (QC limits)

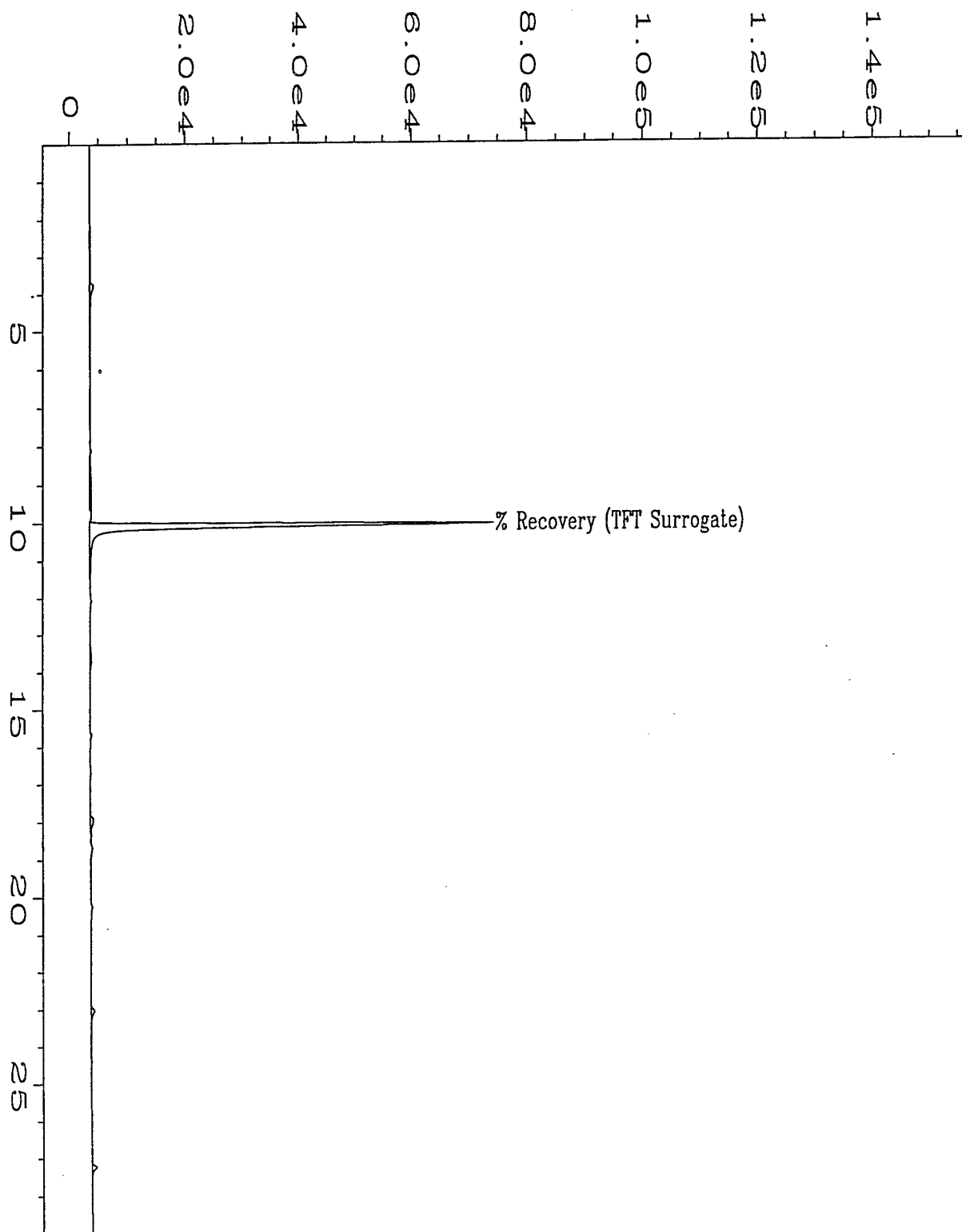
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10711\013F0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 13
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X08735;1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	TX10711.MT
quired on	: 11 Jul 95 07:12 PM	Analysis Method	: TX10711.MT
Report Created on:	: 12 Jul 95 11:16 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 08:44 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-16;5ml Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number : MW-17
Lab Sample Number : X08736
Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project No. : 722450.26
Lab Project No. : 95-2193
Dilution Factor : 1.00
Method : 602
Matrix : Water
Lab File No. : BX1071114
Method Blank No. : MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	37	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		87%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

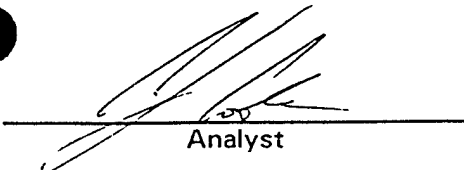
E = Extrapolated value.

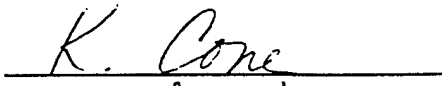
U = Compound analyzed for, but not detected.

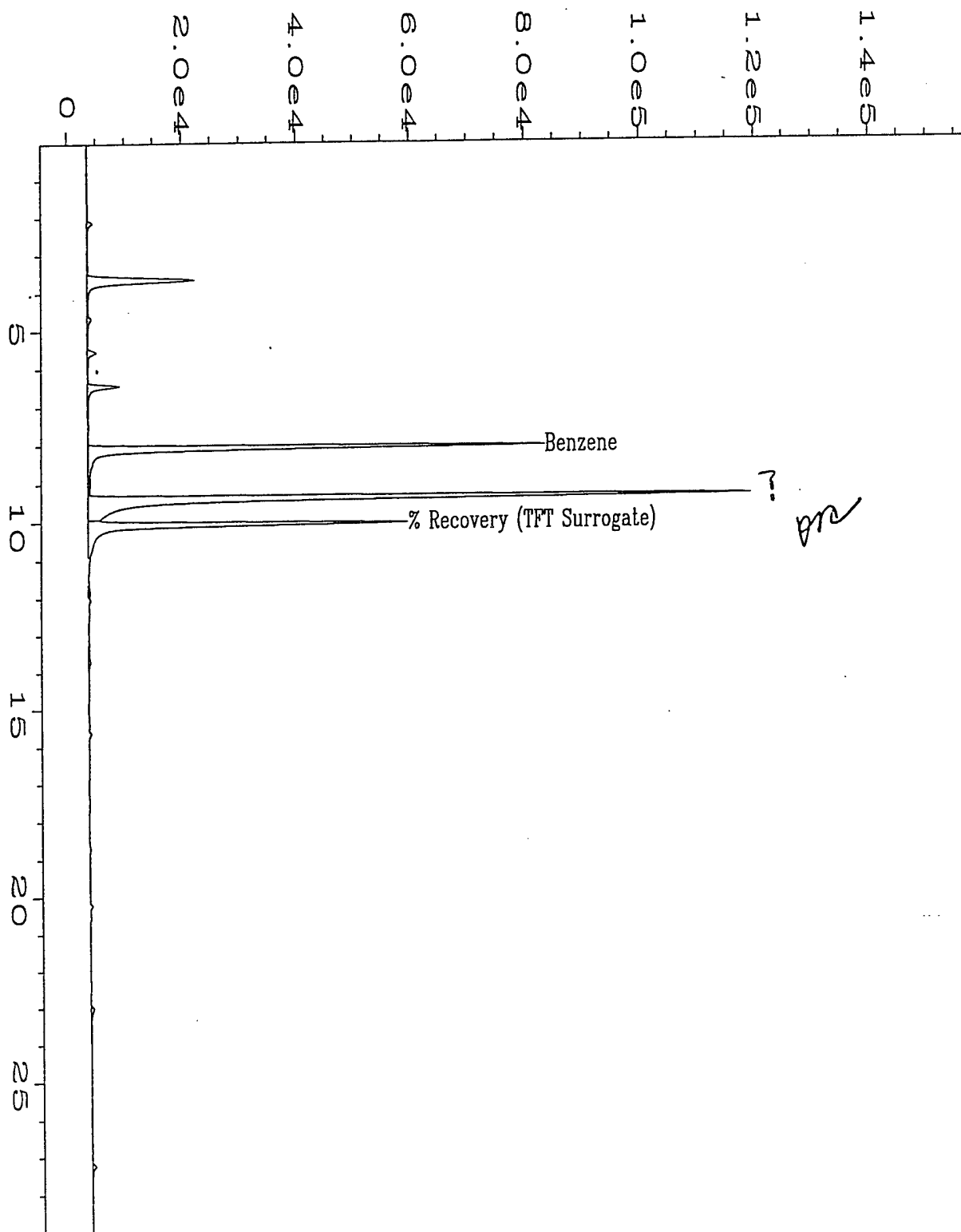
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10711\014F0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 14
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X08736;1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX10711.M
quired on	: 11 Jul 95 07:53 PM	Analysis Method	: BX10711.M
Report Created on:	: 12 Jul 95 11:16 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 08:44 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-17;5ml Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-15	Client Project No.	: 722450.26
Lab Sample Number	: X08737	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071115
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		86%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

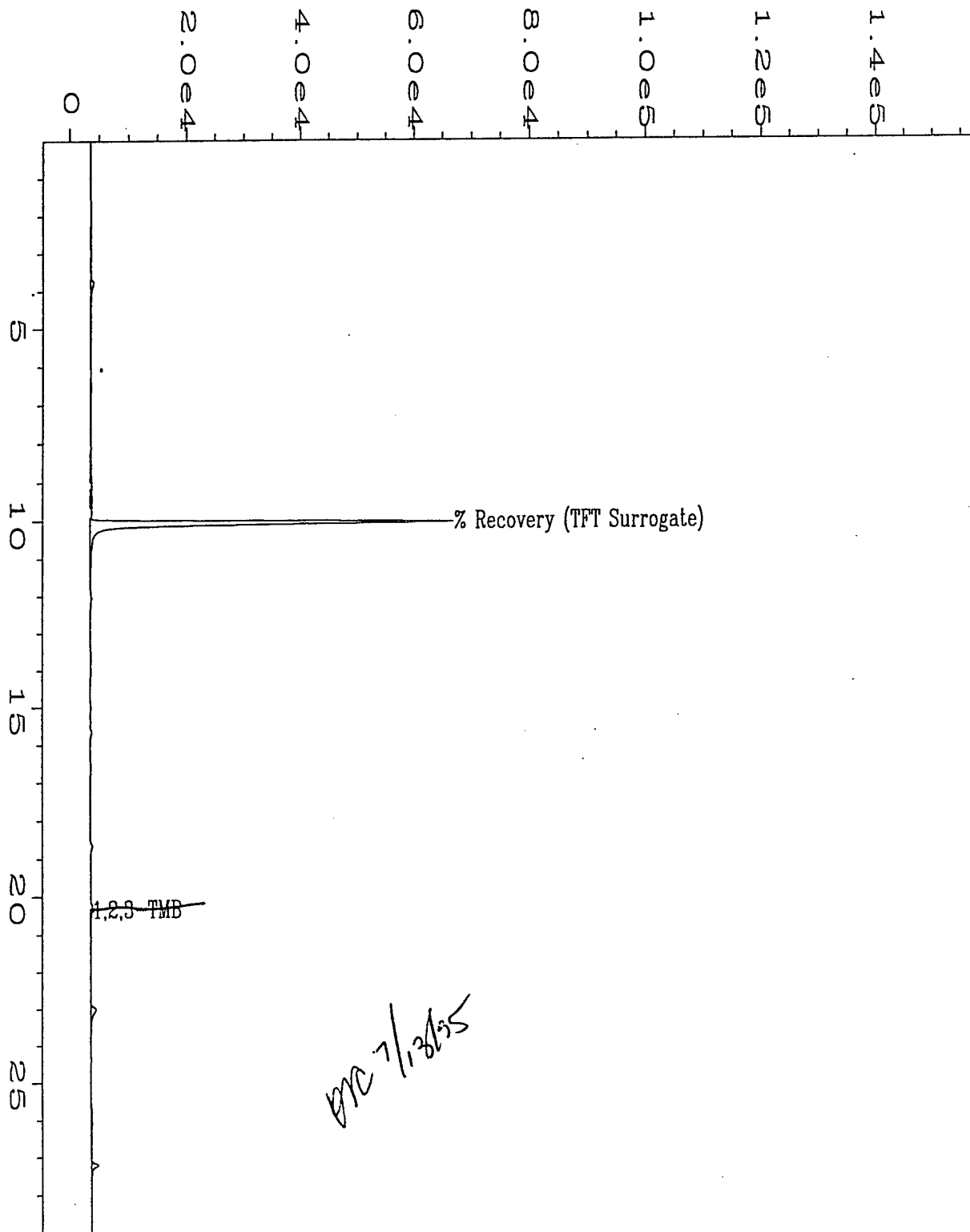
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.



Analyst



Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10711\015F0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 15
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X08737;1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	MT
quired on	: 11 Jul 95 08:35 PM	Analysis Method	: MT
ort Created on:	12 Jul 95 11:16 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 08:44 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-15;5ml Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

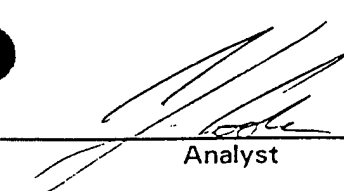
Client Sample Number	: MW-14	Client Project No.	: 722450.26
Lab Sample Number	: X08738	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071116
		Method Blank No.	: MB1071195

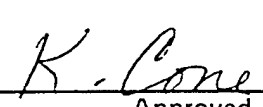
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		87%	70%-130% (QC limits)

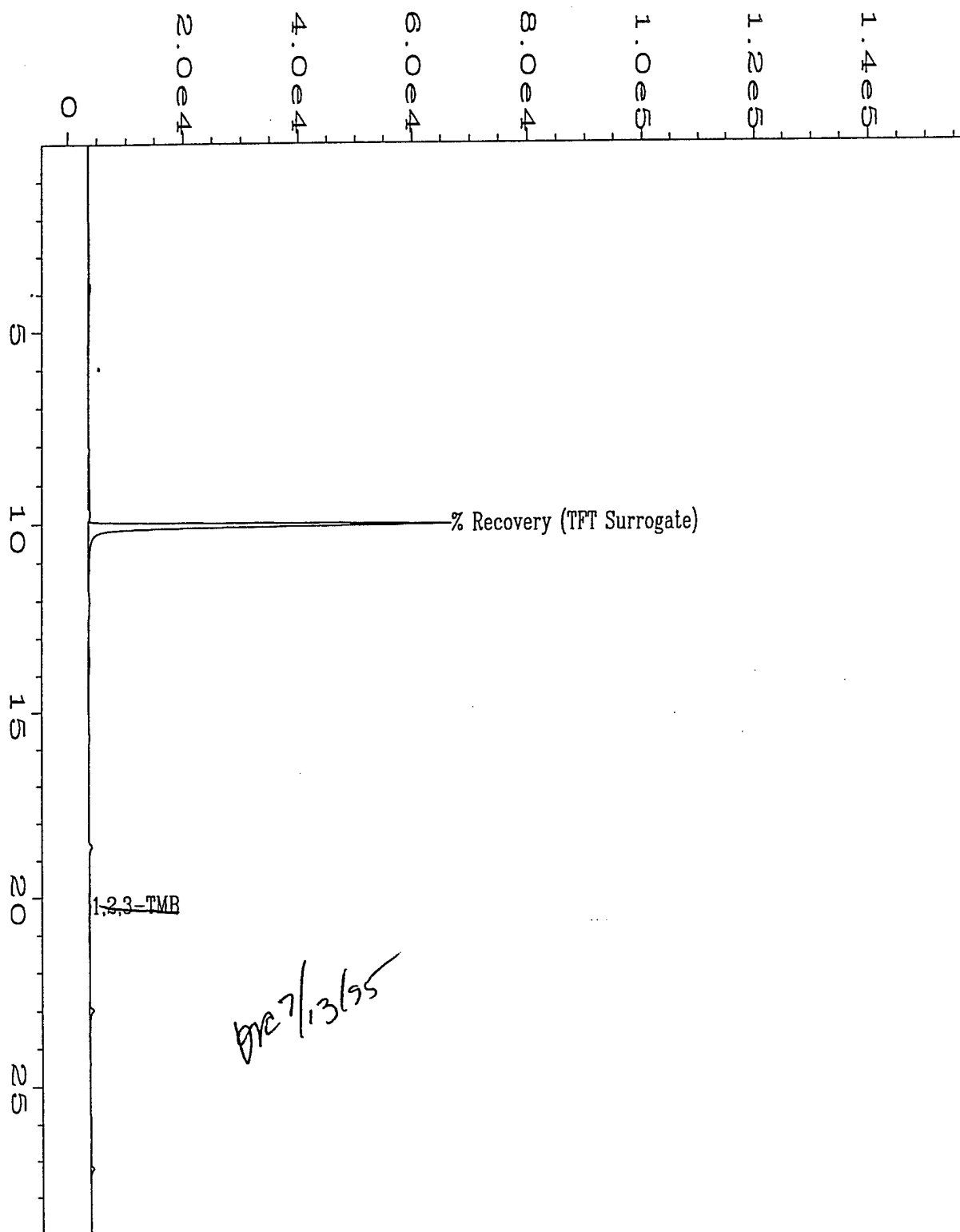
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10711\016F0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 16
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X08738;1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX10711.MT
quired on	: 11 Jul 95 09:16 PM	Analysis Method	: BX10711.MT
Report Created on:	: 12 Jul 95 11:16 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 08:44 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-14;5ml Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-19	Client Project No.	: 722450.26
Lab Sample Number	: X08739	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071117
		Method Blank No.	: MB1071195

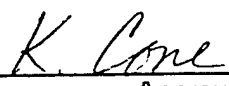
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		94%	70%-130% (QC limits)

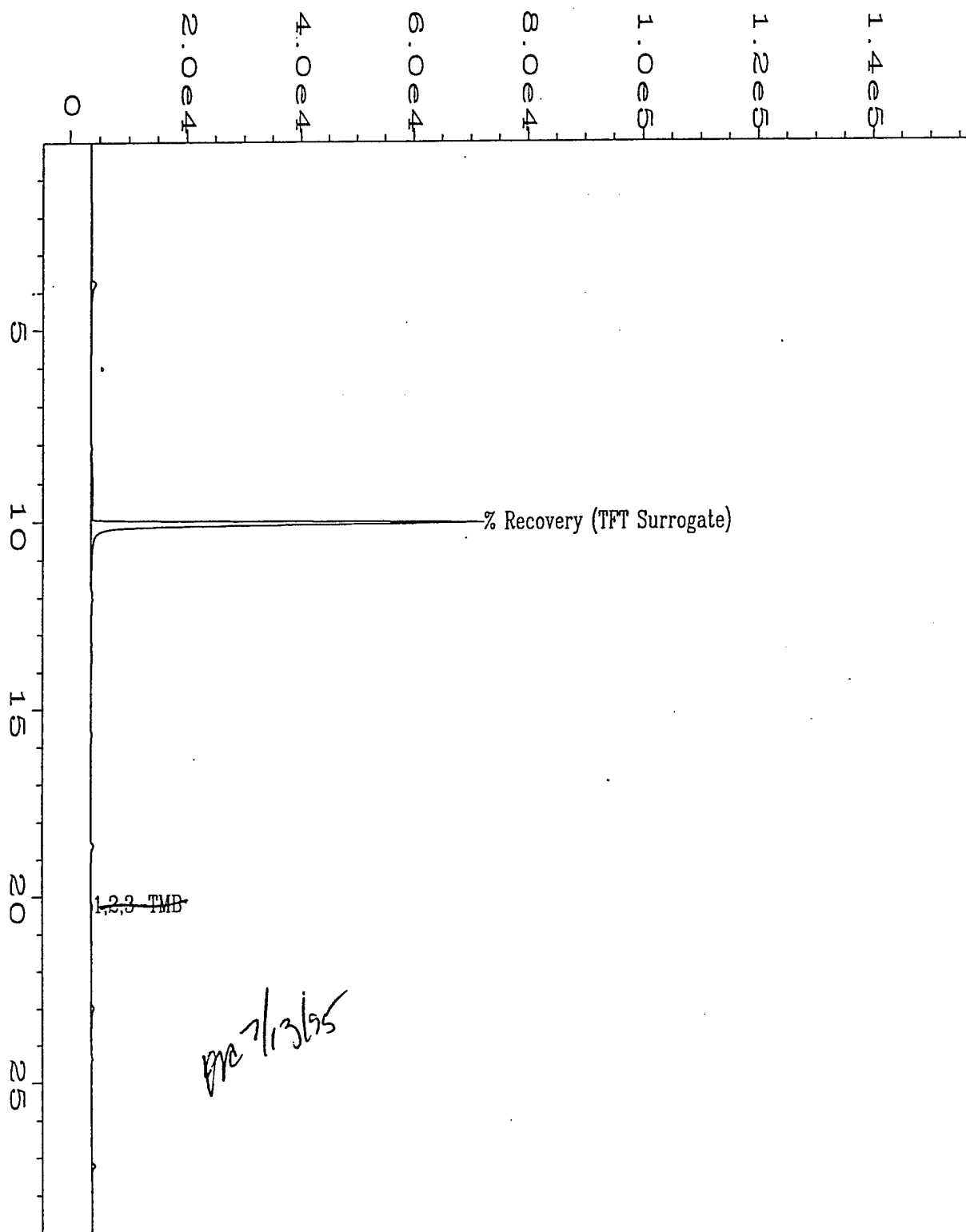
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10711\017F0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 17
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X08739;1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX10711.M
quired on	: 11 Jul 95 09:58 PM	Analysis Method	: BX10711.M
Report Created on:	: 12 Jul 95 11:16 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 08:44 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-19;5ml Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

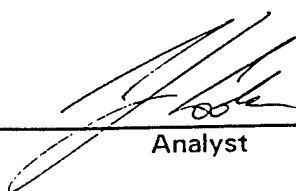
Client Sample Number	: MW-18	Client Project No.	: 722450.26
Lab Sample Number	: X08740	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071118
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	1.0	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		83%	70%-130% (QC limits)

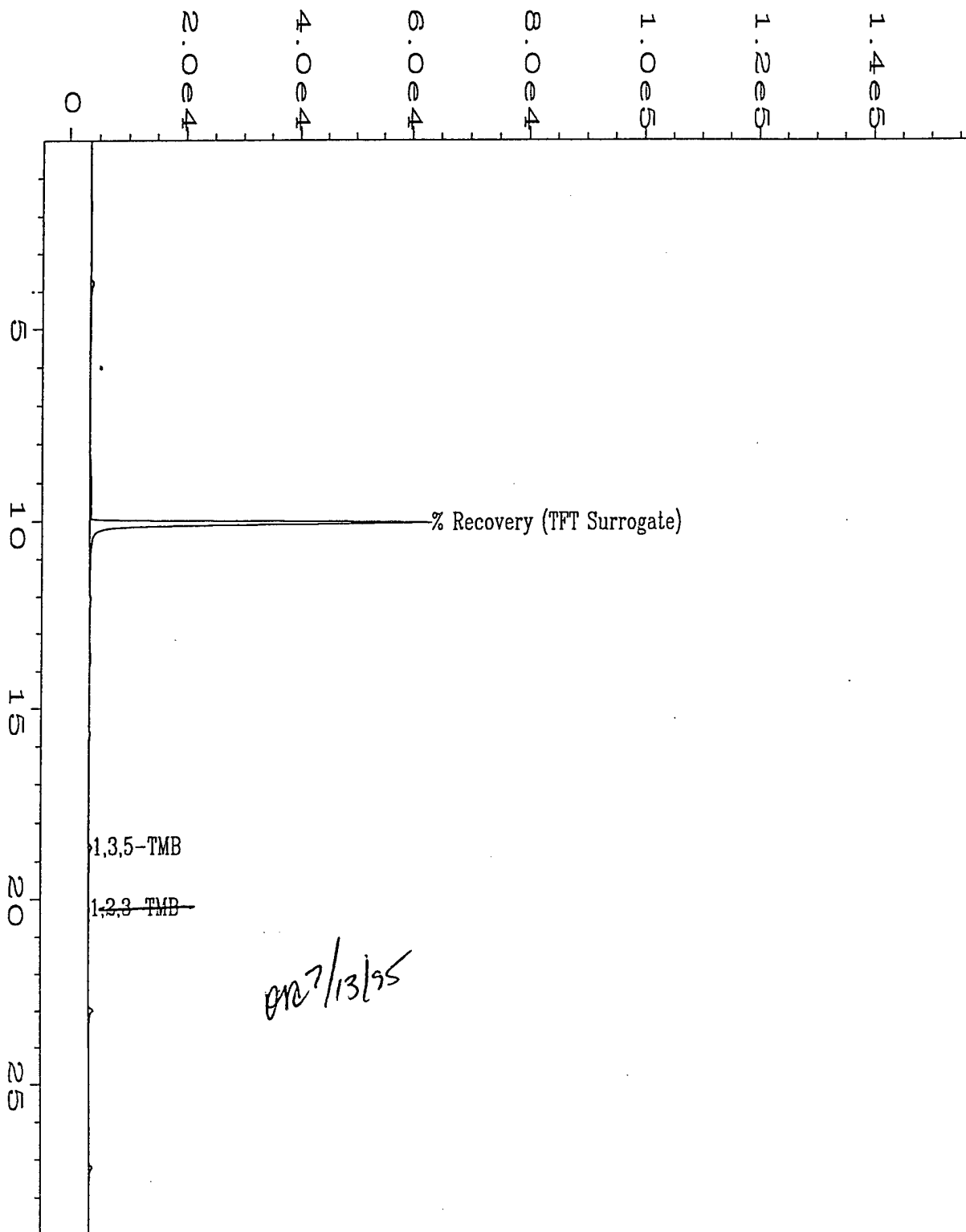
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\1\DATA\BX10711\018F0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 18
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X08740;1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX10711.MT
quired on	: 11 Jul 95 10:39 PM	Analysis Method	: BX10711.MT
Report Created on:	: 12 Jul 95 11:16 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 08:44 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-18;5ml Water		

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(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-20	Client Project No.	: 722450.26
Lab Sample Number	: X08741	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071120
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	1.1	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		80%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

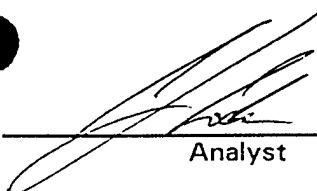
E = Extrapolated value.

U = Compound analyzed for, but not detected.

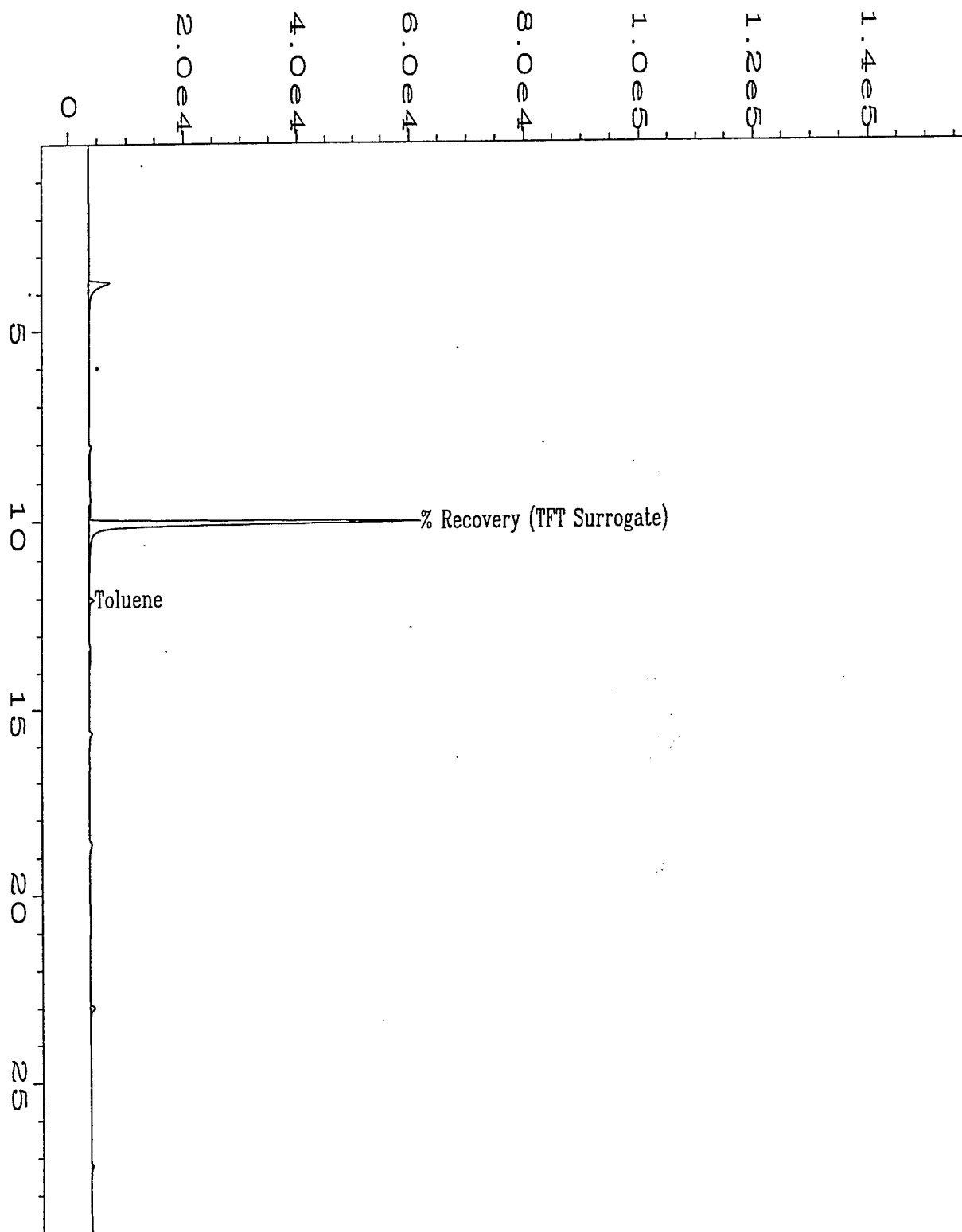
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\1\DATA\BX10711\020F0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 20
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X08741;1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX10711.MT
quired on	: 12 Jul 95 00:02 AM	Analysis Method	: BX10711.MT
port Created on:	: 12 Jul 95 11:17 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 08:44 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-20;5ml Water		

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Method 602 Data Report

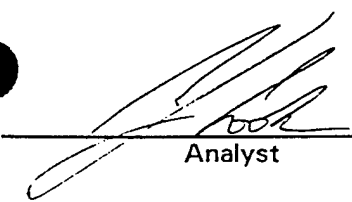
Client Sample Number	: MW-21	Client Project No.	: 722450.26
Lab Sample Number	: X08742	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071121
		Method Blank No.	: MB1071195

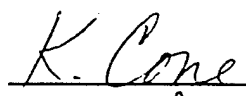
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	0.8	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	1.1	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		84%	70%-130% (QC limits)

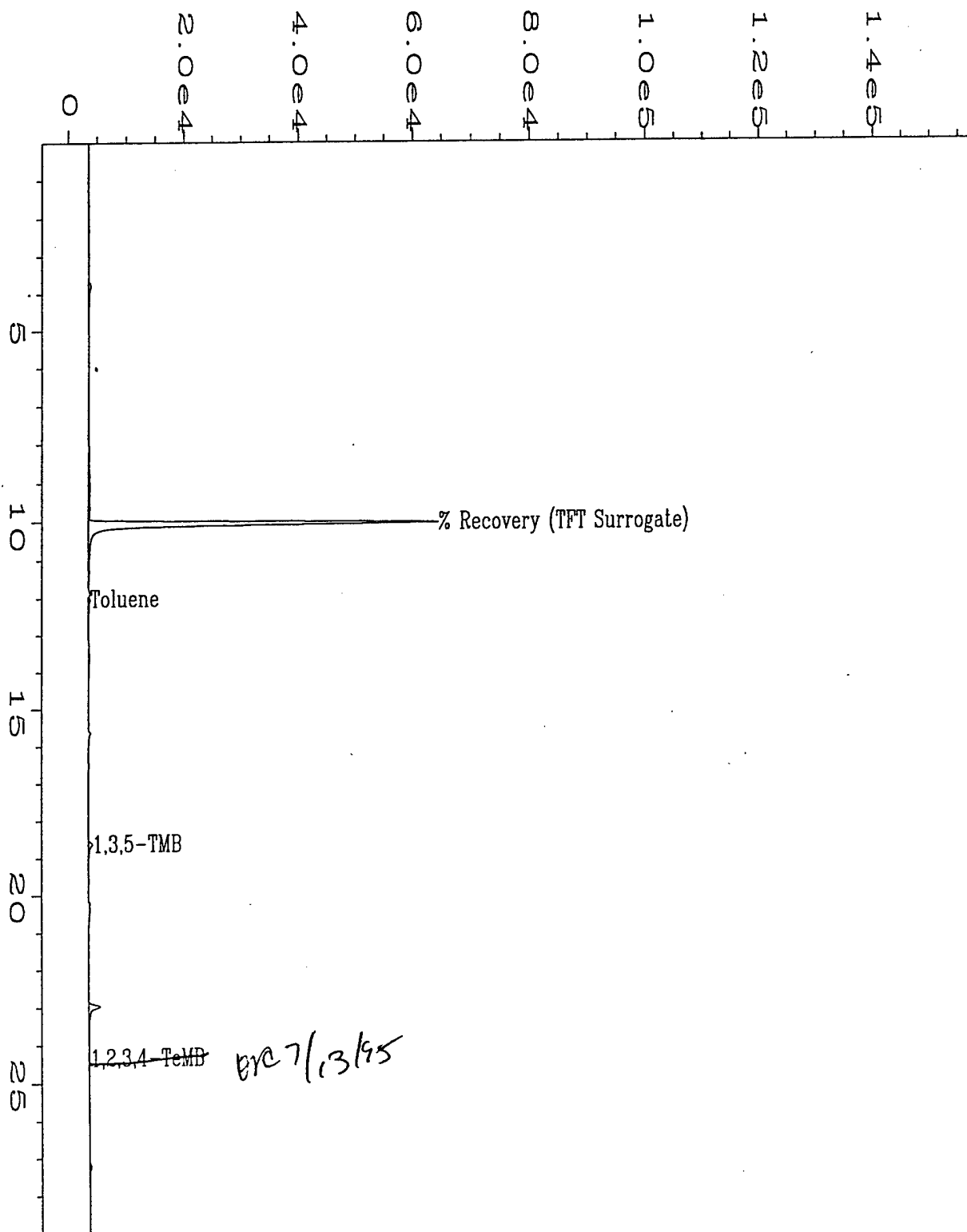
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\1\DATA\BX10711\021F0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 21
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X08742;1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BY10711.T
quired on	: 12 Jul 95 00:44 AM	Analysis Method	: BY10711.T
Report Created on:	12 Jul 95 11:17 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 08:44 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-21;5ml Water		

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Method 602 Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.26
Lab Sample Number	: X08743	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071123
		Method Blank No.	: MB1071195

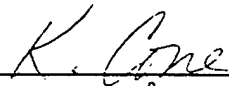
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		72%	70%-130% (QC limits)

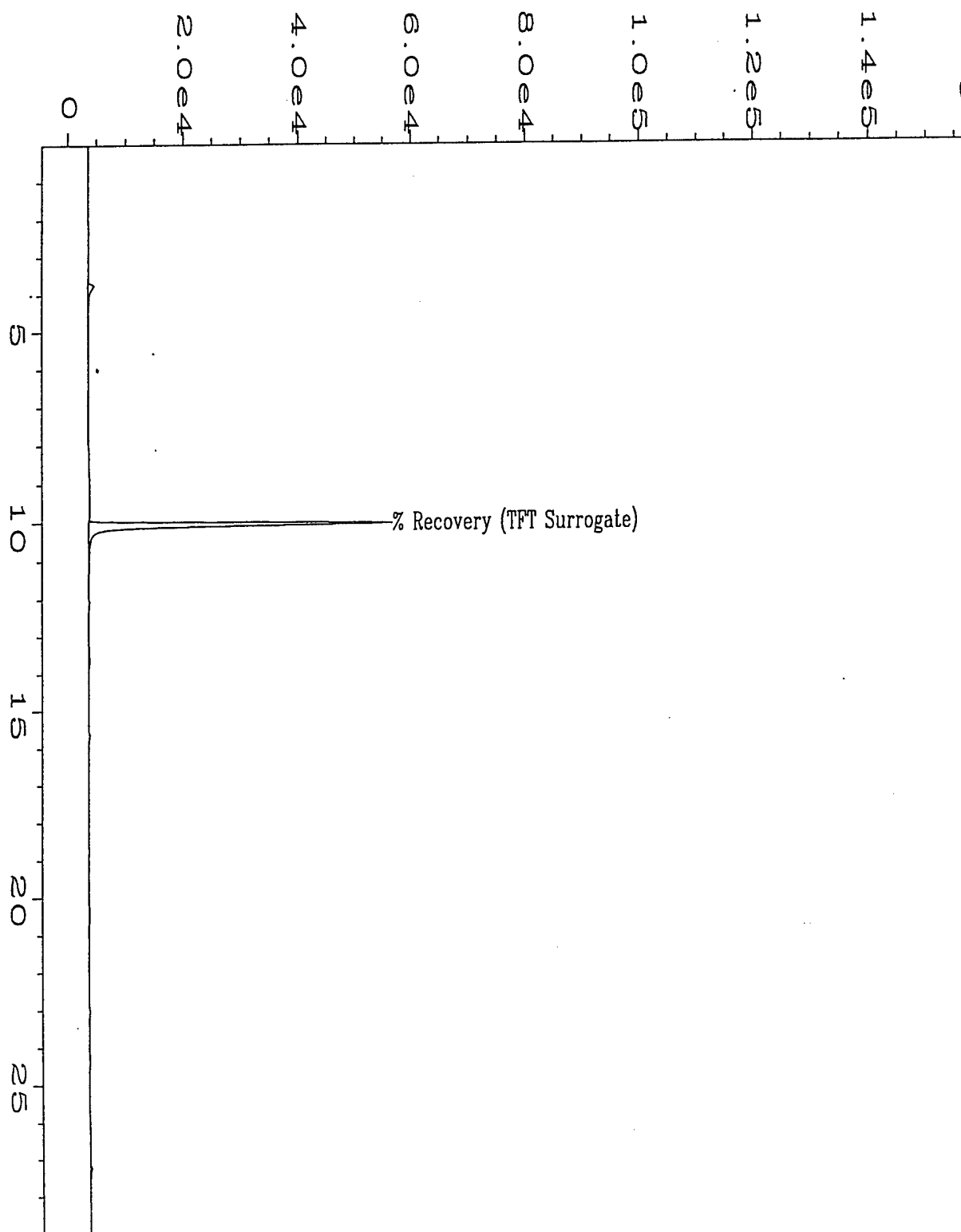
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10711\023F0901.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 23
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X08743;1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX10711.M
quired on	: 12 Jul 95 02:06 AM	Analysis Method	: BX10711.M
port Created on:	: 12 Jul 95 11:17 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 08:44 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;Trip Blank;5ml Water		

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4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-21	Client Project No.	: 722450.26
Lab Sample No.	: X08742	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	EPA Method No.	: 602
Date Received	: 7/11/95	Matrix	: Water
Date Prepared	: 6/12/95	Lab File Number(s)	: BX1071211,12
Date Analyzed	: 6/12/95	Method Blank	: MB1071295
		Dilution Factor	: 1

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	Concentration (ug/L)		Comments
			MS	MSD	
Benzene	20.0	0.0	14.2	14.7	
Toluene	20.0	0.8	14.3	14.8	
Chlorobenzene	20.0	0.0	13.8	14.4	
Ethylbenzene	20.0	0.0	14.0	14.6	
m,p-Xylene	40.0	0.0	28.5	30.0	
o-Xylene	20.0	0.0	14.2	14.8	
1,3,5-TMB	20.0	1.1	13.7	14.2	B
1,2,4-TMB	20.0	0.0	13.4	14.0	
1,2,3-TMB	20.0	0.0	13.7	14.4	
1,2,3,4-TeMB	20.0	0.0	12.8	13.5	
Surrogate	100.0	84%	84%	78%	% RECOVERY

Compound		MS % RECOVERY	MSD % RECOVERY	RPD	QC# Limits		
					RPD	%REC	
Benzene		71.0	73.5	3.5	25	50	- 150
Toluene		67.5	70.0	3.6	25	50	- 148
Chlorobenzene		69.0	72.0	4.3	25	55	- 135
Ethylbenzene		70.0	73.0	4.2	25	50	- 150
m,p-Xylene		71.3	75.0	5.1	25	50	- 150
o-Xylene		71.0	74.0	4.1	25	50	- 150
1,3,5-TMB		63.0	65.5	3.9	25	50	- 150
1,2,4-TMB		67.0	70.0	4.4	25	50	- 150
1,2,3-TMB		68.5	72.0	5.0	25	50	- 150
1,2,3,4-TeMB		64.0	67.5	5.3	25	50	- 150
Surrogate		84.0	78.0	NA	NA	70	- 130

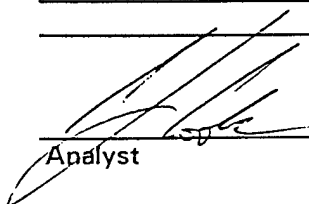
= Values taken from EPA methods 602/8020.

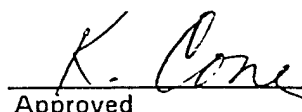
* = Values outside of QC limits.

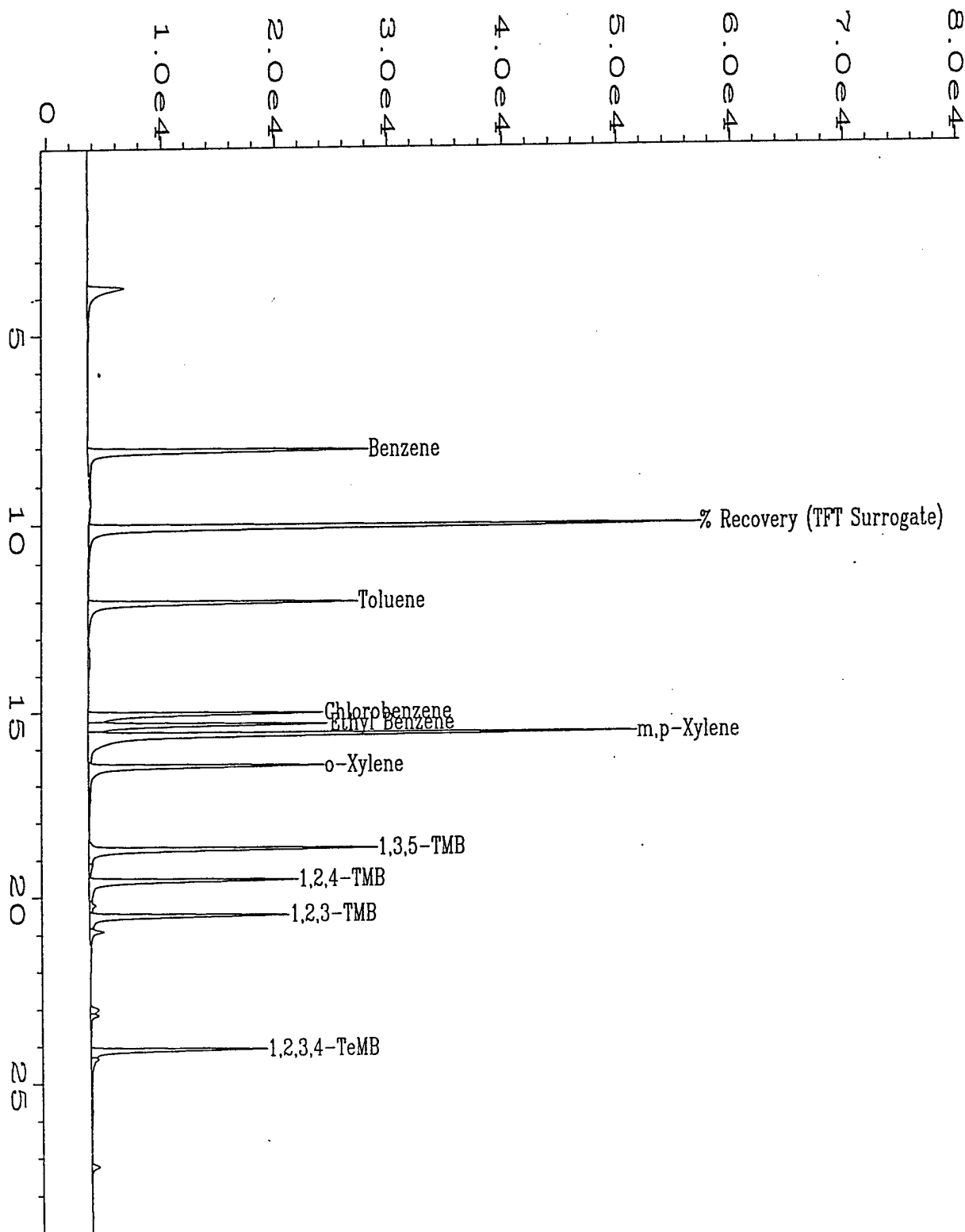
RPD: 0 out of (10) outside limits.

Spike Recovery: 0 out of (20) outside limits.

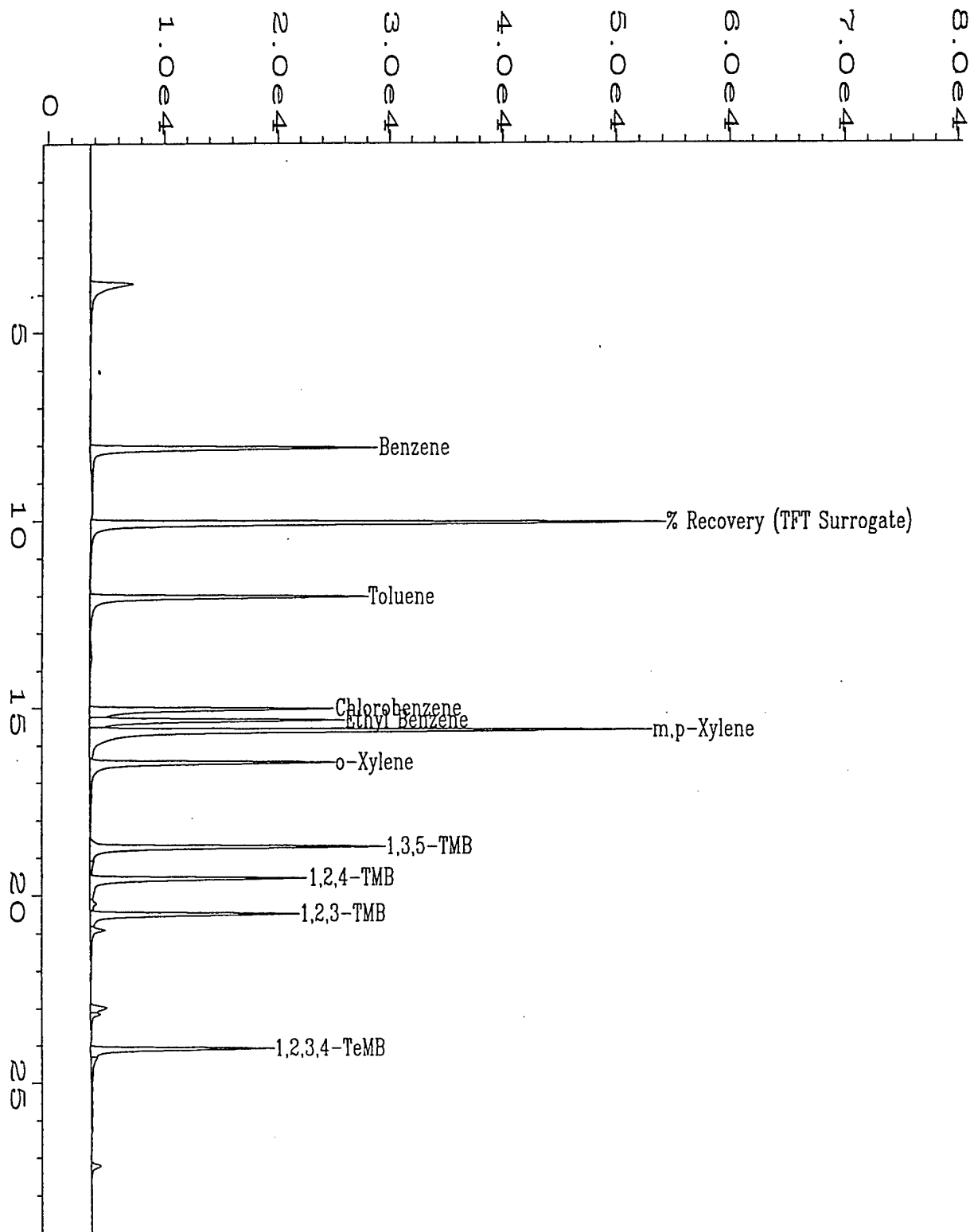
Comments:


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10712\011F0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 11
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X08742MS;1	Sequence Line	: 8
Print Time Bar Code:		Instrument Method	: BX10712.MT
Printed on	: 12 Jul 95 06:34 PM	Analysis Method	: BX10712.MT
Report Created on:	13 Jul 95 09:46 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 04:18 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-21;5ml Water + 20ppb BTEX Std.		



Data File Name	: C:\HPCHEM\1\DATA\BX10712\012F0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 12
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X08742MSD;1	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: BX10712.MTH
Required on	: 12 Jul 95 07:16 PM	Analysis Method	: BX10712.MTH
Report Created on	: 13 Jul 95 09:46 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 04:18 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-21;5ml Water + 20ppb BTEX Std.		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St.
Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS1071195
Date Extracted/Prepared : 7/11/95
Date Analyzed : 7/11/95
Spike Amount (ug/L) : 20.0

Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX1071111

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.7	88.5	68-111*
Toluene	108-88-3	18.5	92.5	71-111*
Chlorobenzene	108-90-7	18.6	93.0	65-115*
Ethyl Benzene	100-41-4	18.7	93.5	75-115*
m,p-Xylene	108-38-3	19.9	99.5	74-113*
o-Xylene	106-42-3	18.5	92.5	65-115*
1,3,5-Trimethylbenzene	95-47-6	18.6	93.0	69-105*
1,2,4-Trimethylbenzene	108-67-8	18.1	90.5	68-110*
1,2,3-Trimethylbenzene	95-63-6	22.4	112.0	71-127*
1,2,3,4-Tetramethylbenzene	526-73-8	18.4	92.0	65-115*
Surrogate Recovery (α,α,α -Trifluorotoluene):		99%	70%-130% (QC limits)	

NOTES:

* = Limits established 7/5/95 KSC

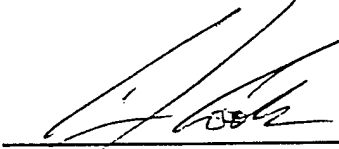
QUALIFIERS:

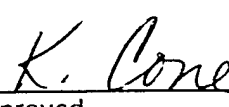
E = Extrapolated value. Value exceeds that of the calibration range.

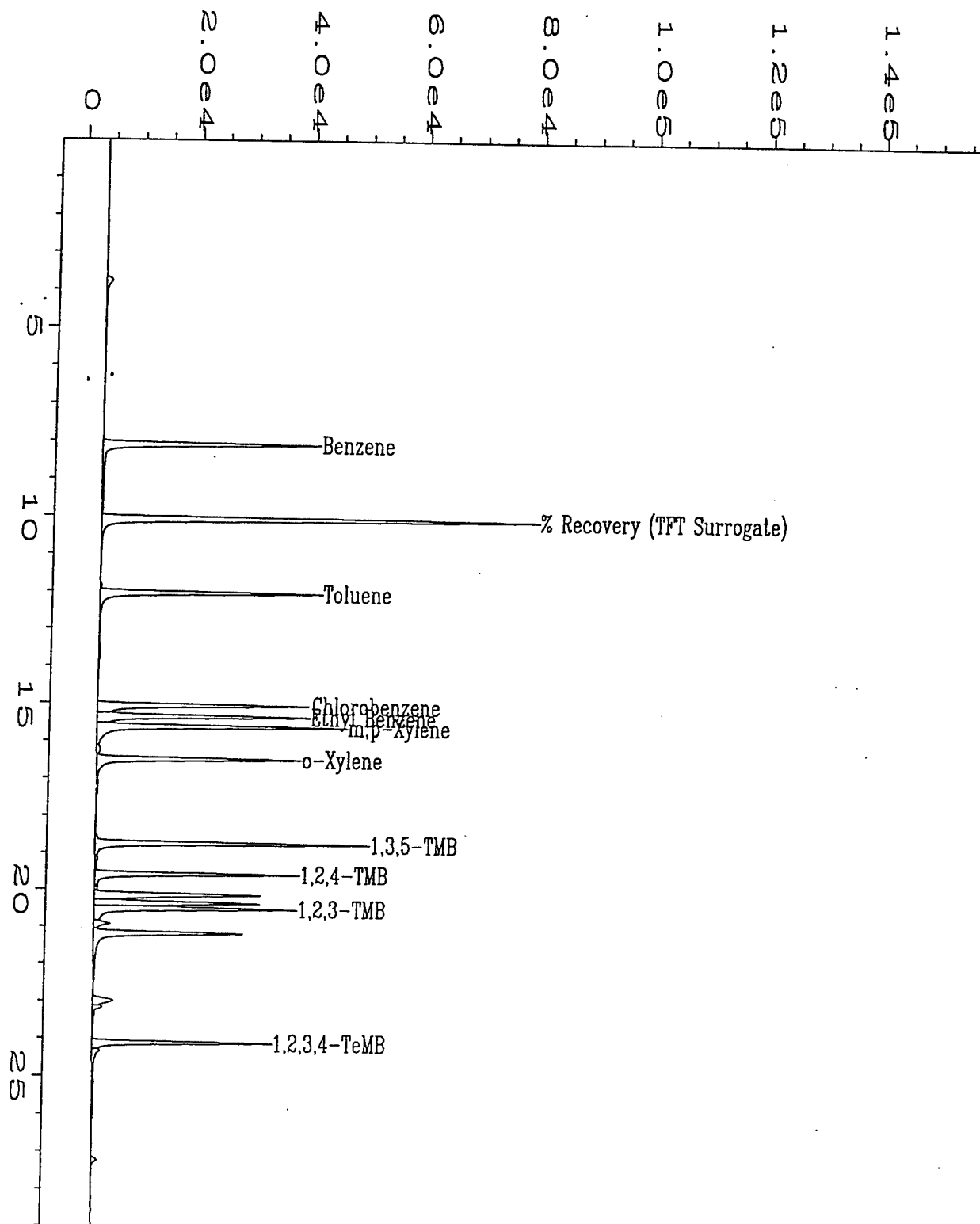
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

NA = Not available/Not analyzed.


Analyst


Approved



Data File Name : C:\HPCHEM\1\DATA\BX10711\011F0901.D

Operator : C.J. Cook

Instrument : BTEX1

Sample Name : LCS1071195

Run Time Bar Code:

Required on : 11 Jul 95 05:49 PM

Report Created on: 12 Jul 95 10:58 AM

Last Recalib on : 12 JUL 95 08:44 AM

Multiplier : 1.

Page Number : 1

Vial Number : 11

Injection Number : 1

Sequence Line : 9

Instrument Method: BX10711.MTH

Analysis Method : BX10711.MTH

Sample Amount : 0

ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St.
Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS1071295
Date Extracted/Prepared : 7/12/95
Date Analyzed : 7/12/95
Spike Amount (ug/L) : 20.0

Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX1071208

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.4	92.0	68-111*
Toluene	108-88-3	18.8	94.0	71-111*
Chlorobenzene	108-90-7	19.4	97.0	65-115*
Ethyl Benzene	100-41-4	19.3	96.5	75-115*
m,p-Xylene	108-38-3	20.0	100.0	74-113*
	106-42-3			
o-Xylene	95-47-6	18.7	93.5	65-115*
1,3,5-Trimethylbenzene	108-67-8	19.8	99.0	69-109*
1,2,4-Trimethylbenzene	95-63-6	19.4	97.0	68-110*
1,2,3-Trimethylbenzene	526-73-8	24.7	123.5	71-127*
1,2,3,4-Tetramethylbenzene	488-23-3	20.1	100.5	65-115*
Surrogate Recovery (α,α,α -Trifluorotoluene):		89%	70%-130% (QC limits)	

NOTES:

* = Limits established 7/5/95 KSC

QUALIFIERS:

E = Extrapolated value. Value exceeds that of the calibration range.

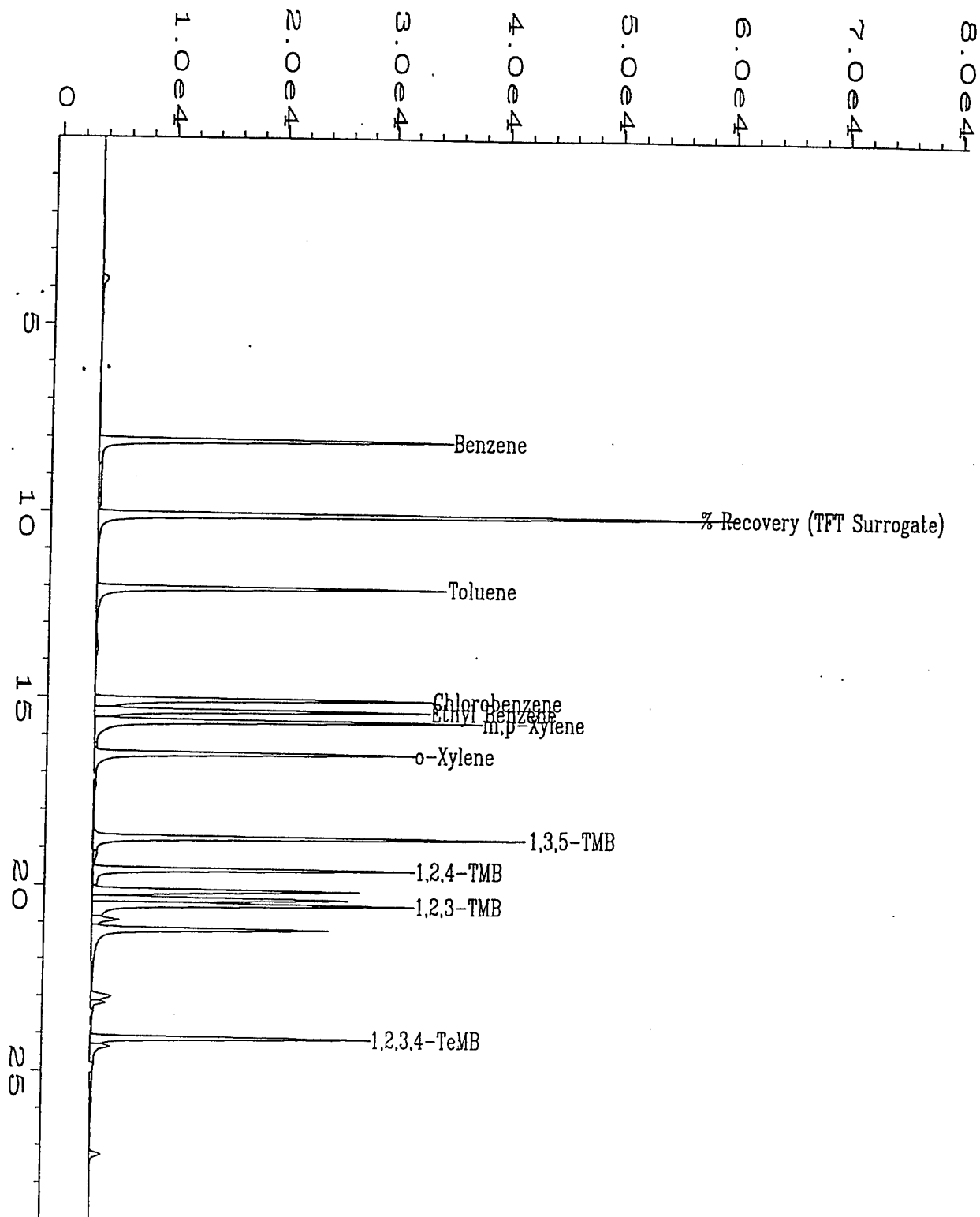
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

NA = Not available/Not analyzed.

Analyst

Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10712\008F0801.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 8
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: LCS1071295	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	BX10712.MTH
Required on	: 12 Jul 95 04:30 PM	Analysis Method	: BX10712.MTH
Report Created on:	13 Jul 95 09:45 AM	Sample Amount	: 0
Last Recalib on	: 12 JUL 95 04:18 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 7/10/95	Client Project Number	: 722450.26
Date Received	: 7/11/95	Lab Project Number	: 95-2193
Date Prepared	: 7/12/95	Matrix	: Water
		Method Number	: EPA 5030/8015 Modified

<u>Evergreen Sample #</u>	<u>Client Sample #</u>	<u>Analysis Date</u>	<u>Surrogate Recovery</u>	<u>Result mg/L</u>	<u>RL mg/L</u>
MB071195	METHOD BLANK	7/12/95	100%	U	0.1
X08741	MW-20	7/12/95	102%	U	0.1
X08735	MW-16	7/12/95	103%	U	0.1
X08736	MW-17	7/12/95	102%	0.1	0.1
X08737	MW-15	7/12/95	102%	U	0.1
X08738	MW-14	7/12/95	101%	U	0.1
X08739	MW-19	7/12/95	101%	U	0.1
X08740	MW-18	7/12/95	99%	U	0.1

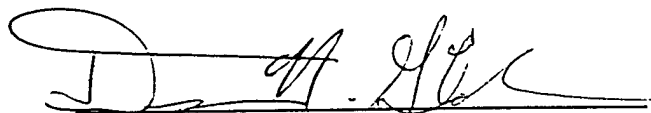
QUALIFIERS

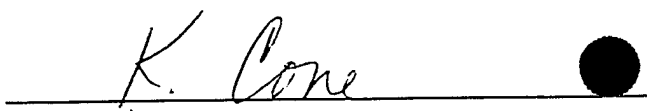
U = TVH analyzed for but not detected.

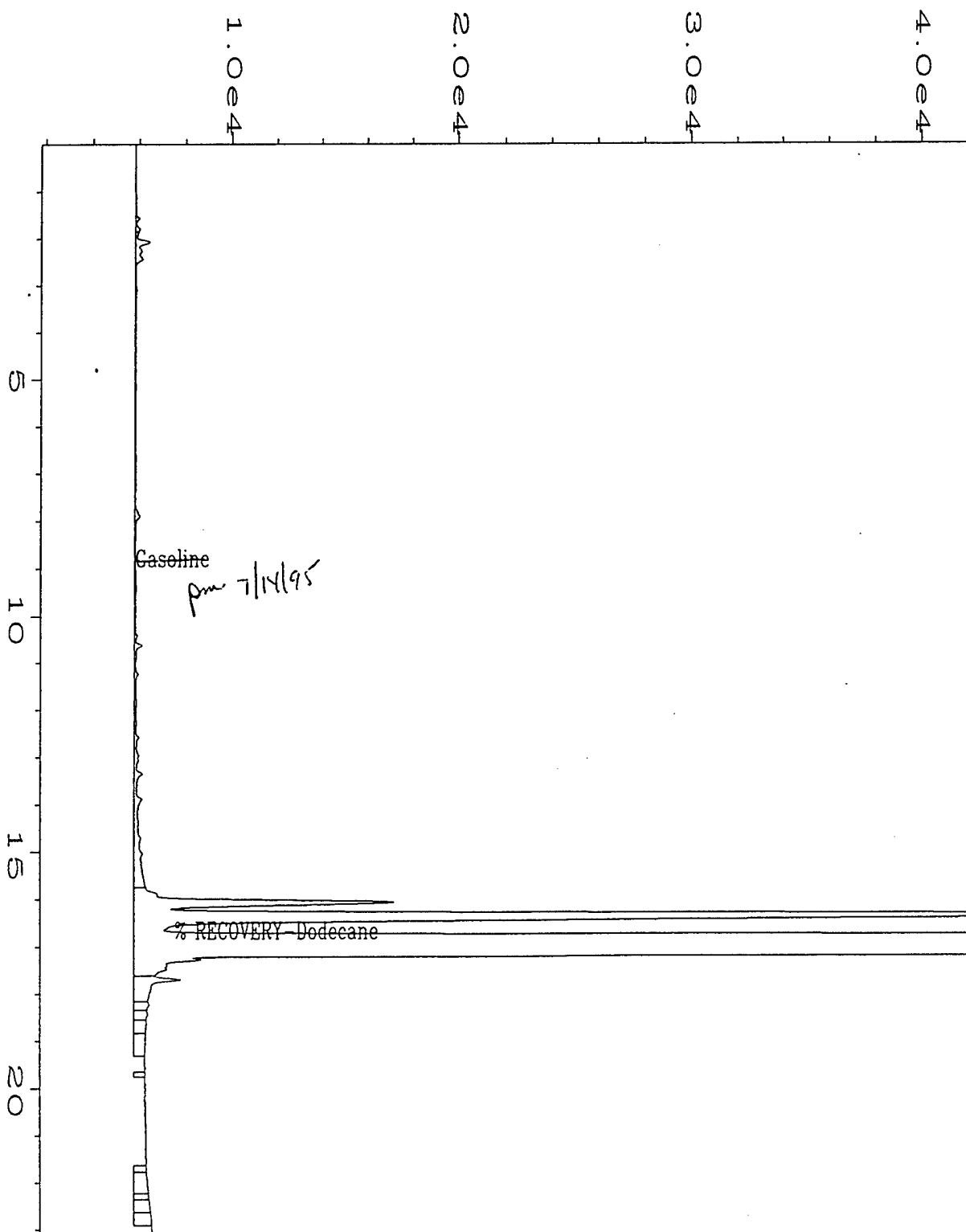
B = TVH found in blank also.

E = Extrapolated value. Exceeds calibration range.

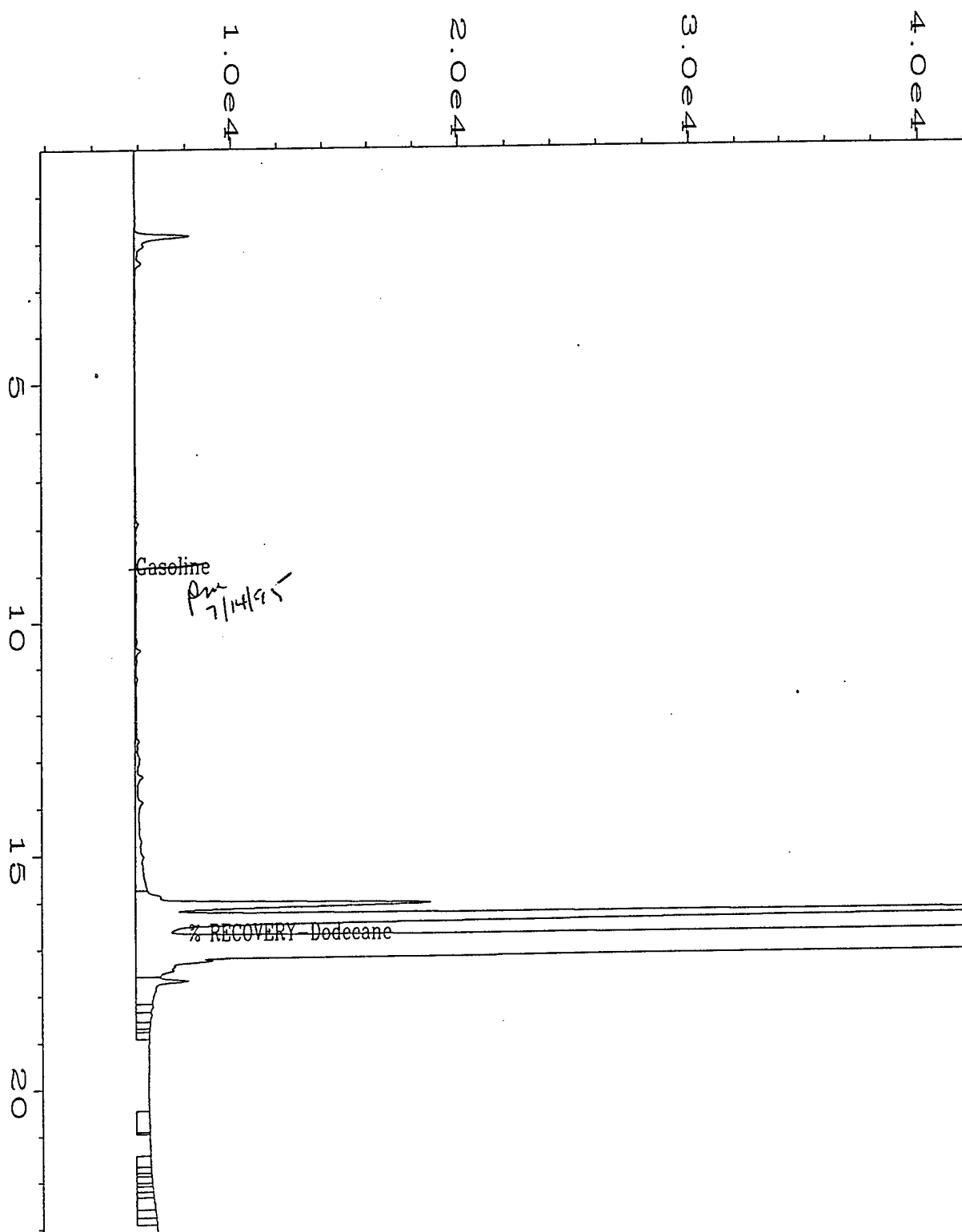
RL = Reporting Limit.


Analyst

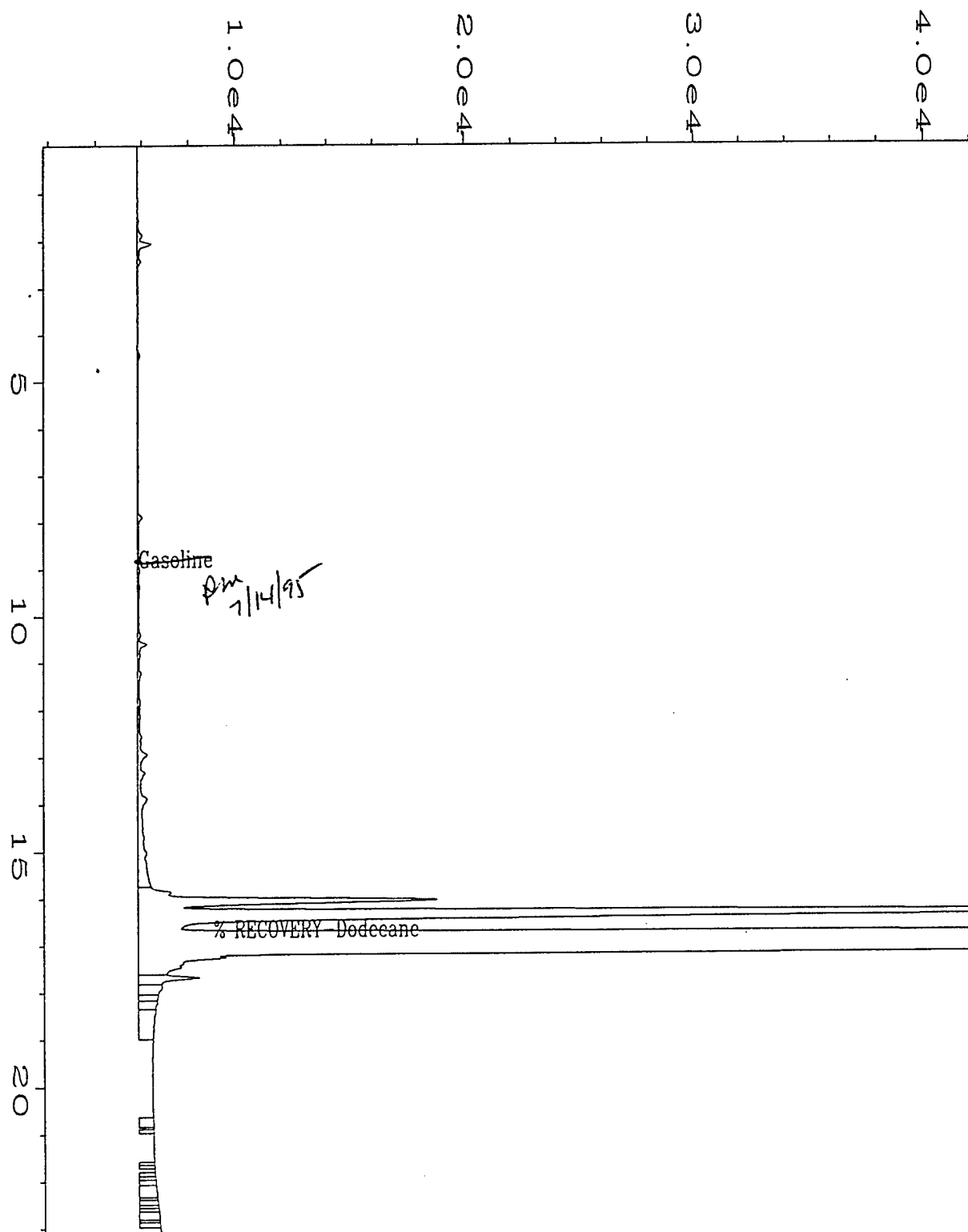

Approved



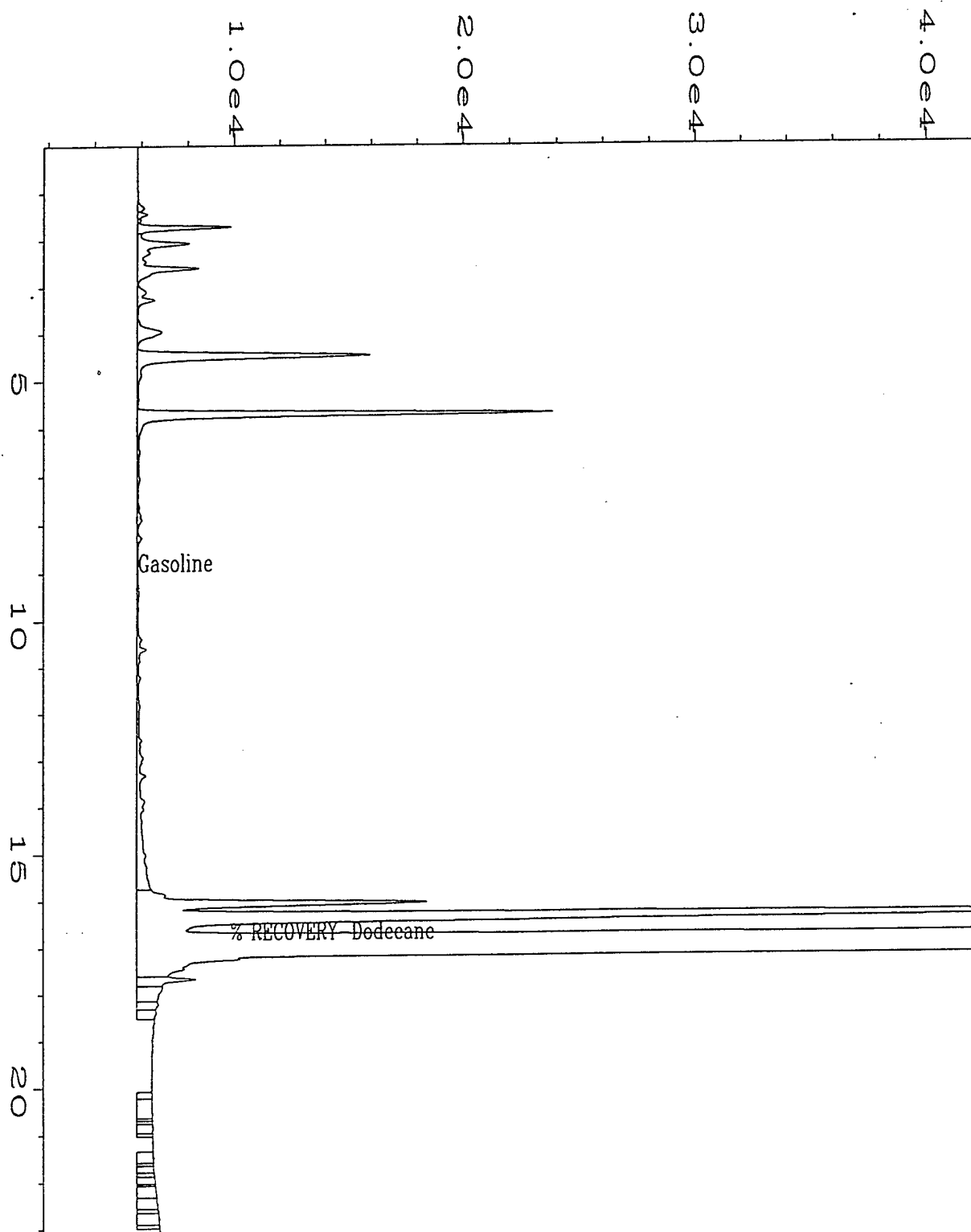
Data File Name	: C:\HPCHEM\1\DATA\TVH0711\009F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 9
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB071195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVHBASE.MTH
Acquired on	: 12 Jul 95 06:21 PM	Analysis Method	: TVH0711.MTH
Report Created on	: 13 Jul 95 02:00 PM	Sample Amount	: 0
Last Recalib on	: 13 JUL 95 01:51 PM	ISTD Amount	:
Multiplier	: 1		



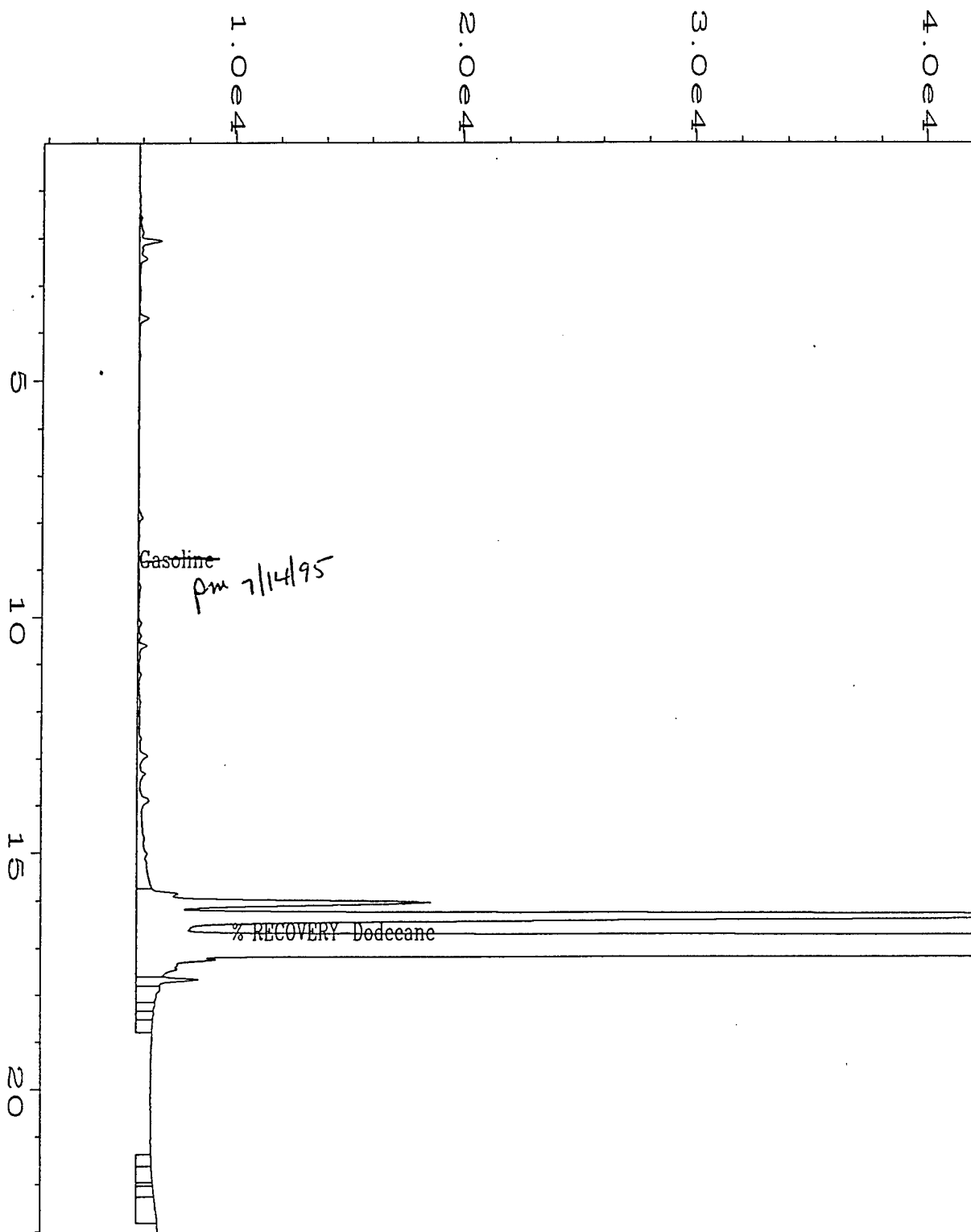
Data File Name	: C:\HPCHEM\1\DATA\TVH0711\010F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 10
Instrument	: TVH	Injection Number	: 1
Sample Name	: X08741D;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVHBAS.MT
quired on	: 12 Jul 95 07:01 PM	Analysis Method	: TVH0711.MT
Report Created on:	: 13 Jul 95 02:00 PM	Sample Amount	: 0
Last Recalib on	: 13 JUL 95 01:51 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-20;WATER		



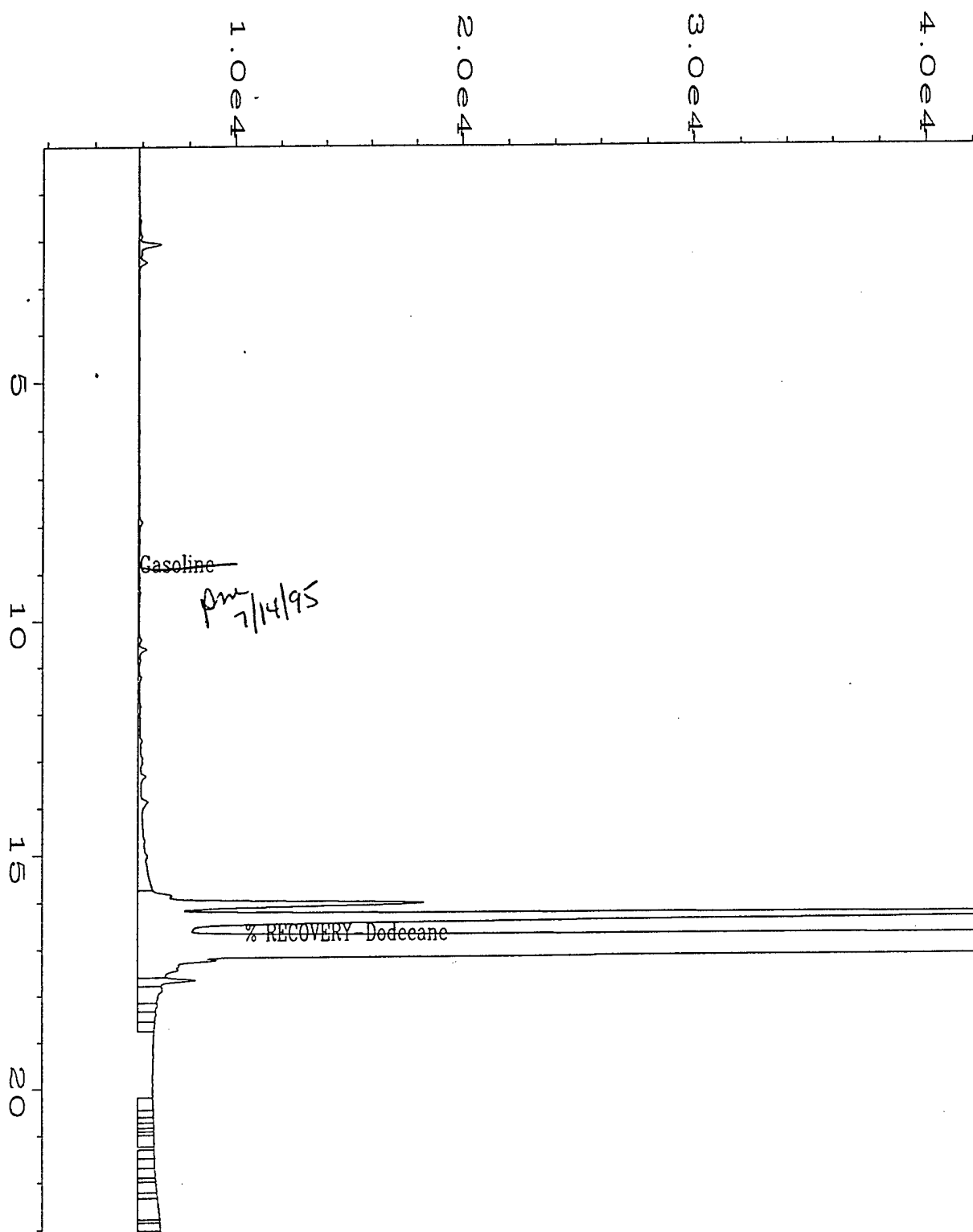
Data File Name	: C:\HPCHEM\1\DATA\TVH0711\011F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 11
Instrument	: TVH	Injection Number	: 1
Sample Name	: X08735D;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVHBASE.MTH
Acquired on	: 12 Jul 95 07:40 PM	Analysis Method	: TVH0711.MTH
Report Created on	: 13 Jul 95 02:00 PM	Sample Amount	: 0
Last Recalib on	: 13 JUL 95 01:51 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-16;WATER		



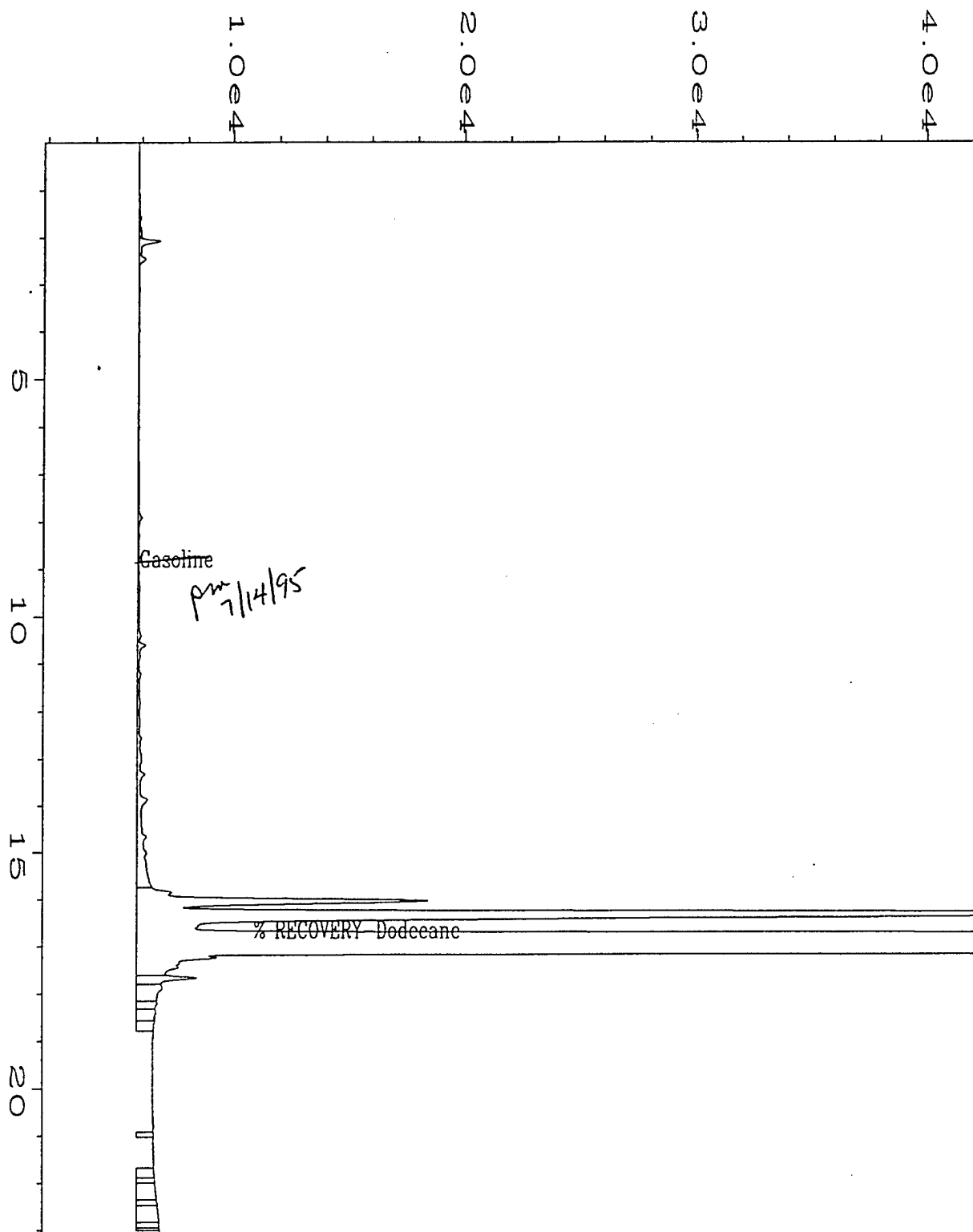
Data File Name	: C:\HPCHEM\1\DATA\TVH0711\012F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 12
Instrument	: TVH	Injection Number	: 1
Sample Name	: X08736D;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVHBAS.MT
quired on	: 12 Jul 95 08:19 PM	Analysis Method	: TVH0711.MT
Report Created on:	: 13 Jul 95 02:00 PM	Sample Amount	: 0
Last Recalib on	: 13 JUL 95 01:51 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-17;WATER		



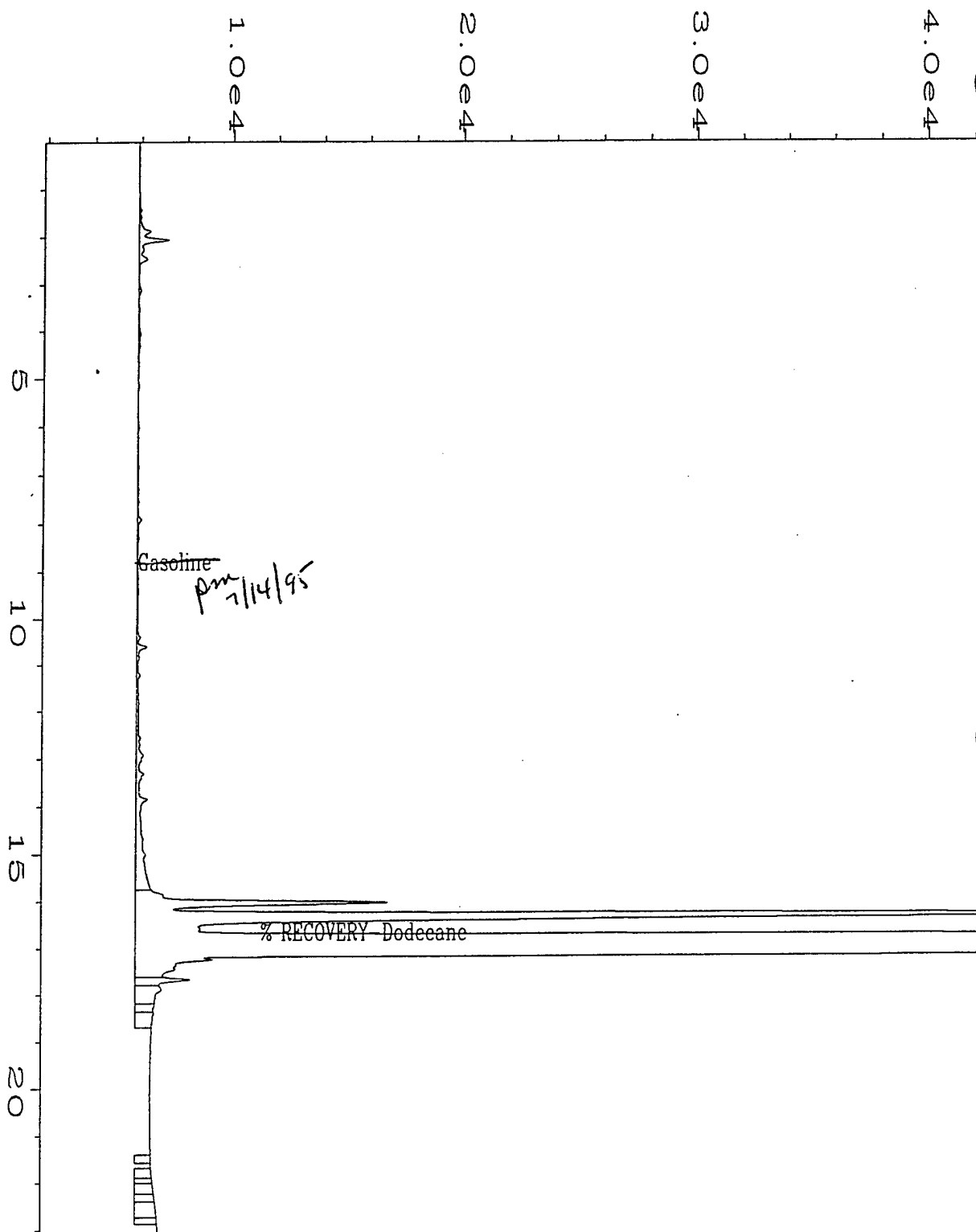
Data File Name	: C:\HPCHEM\1\DATA\TVH0711\013F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 13
Instrument	: TVH	Injection Number	: 1
Sample Name	: X08737D;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVHBASE.MTH
Acquired on	: 12 Jul 95 08:58 PM	Analysis Method	: TVH0711.MTH
Report Created on:	: 13 Jul 95 02:00 PM	Sample Amount	: 0
Last Recalib on	: 13 JUL 95 01:51 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-15;WATER		



Data File Name	: C:\HPCHEM\1\DATA\TVH0711\014F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 14
Instrument	: TVH	Injection Number	: 1
Sample Name	: X08738D;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVHBAS
quired on	: 12 Jul 95 09:37 PM	Analysis Method	: TVH0711
Report Created on:	: 13 Jul 95 02:00 PM	Sample Amount	: 0
Last Recalib on	: 13 JUL 95 01:51 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-14;WATER		



Data File Name	: C:\HPCHEM\1\DATA\TVH0711\015F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 15
Instrument	: TVH	Injection Number	: 1
Sample Name	: X08739D;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVHBASE.MTH
Acquired on	: 12 Jul 95 10:16 PM	Analysis Method	: TVH0711.MTH
Report Created on:	13 Jul 95 02:01 PM	Sample Amount	: 0
Last Recalib on	: 13 JUL 95 01:51 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-19;WATER		



Data File Name	: C:\HPCHEM\1\DATA\TVH0711\016F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 16
Instrument	: TVH	Injection Number	: 1
Sample Name	: X08740D;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVHBAS.MT
quired on	: 12 Jul 95 10:55 PM	Analysis Method	: TVH0711.MT
ort Created on:	: 13 Jul 95 02:01 PM	Sample Amount	: 0
Last Recalib on	: 13 JUL 95 01:51 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-18;WATER		

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TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-20	Client Project No.	: 722450.26
Lab Sample No.	: X08741	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	EPA Method No.	: 5030/8015 Modified
Date Received	: 7/11/95	Matrix	: Water
Date Prepared	: 7/12/95	Method Blank	: MB071195
Date Analyzed	: 7/12/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	0.0	1.86	93%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	2.00	1.88	94%	1.0	50	60-140

RPD: 0 out of (1) outside limits.
Spike Recovery: 0 out of (2) outside limits.

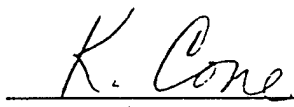
Notes:

NA = Not analyzed/not applicable.

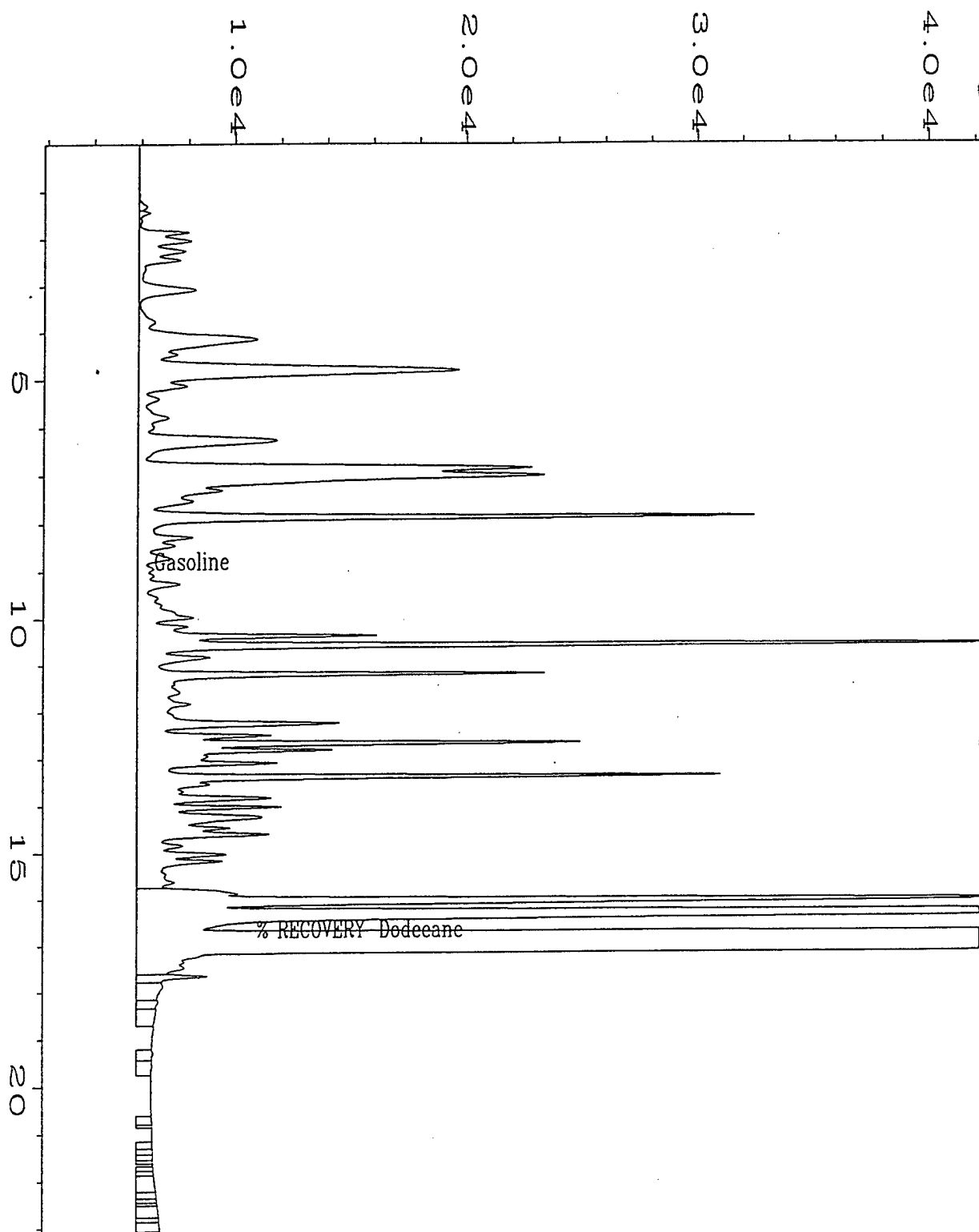
* = Values outside of QC limits.

Comments:

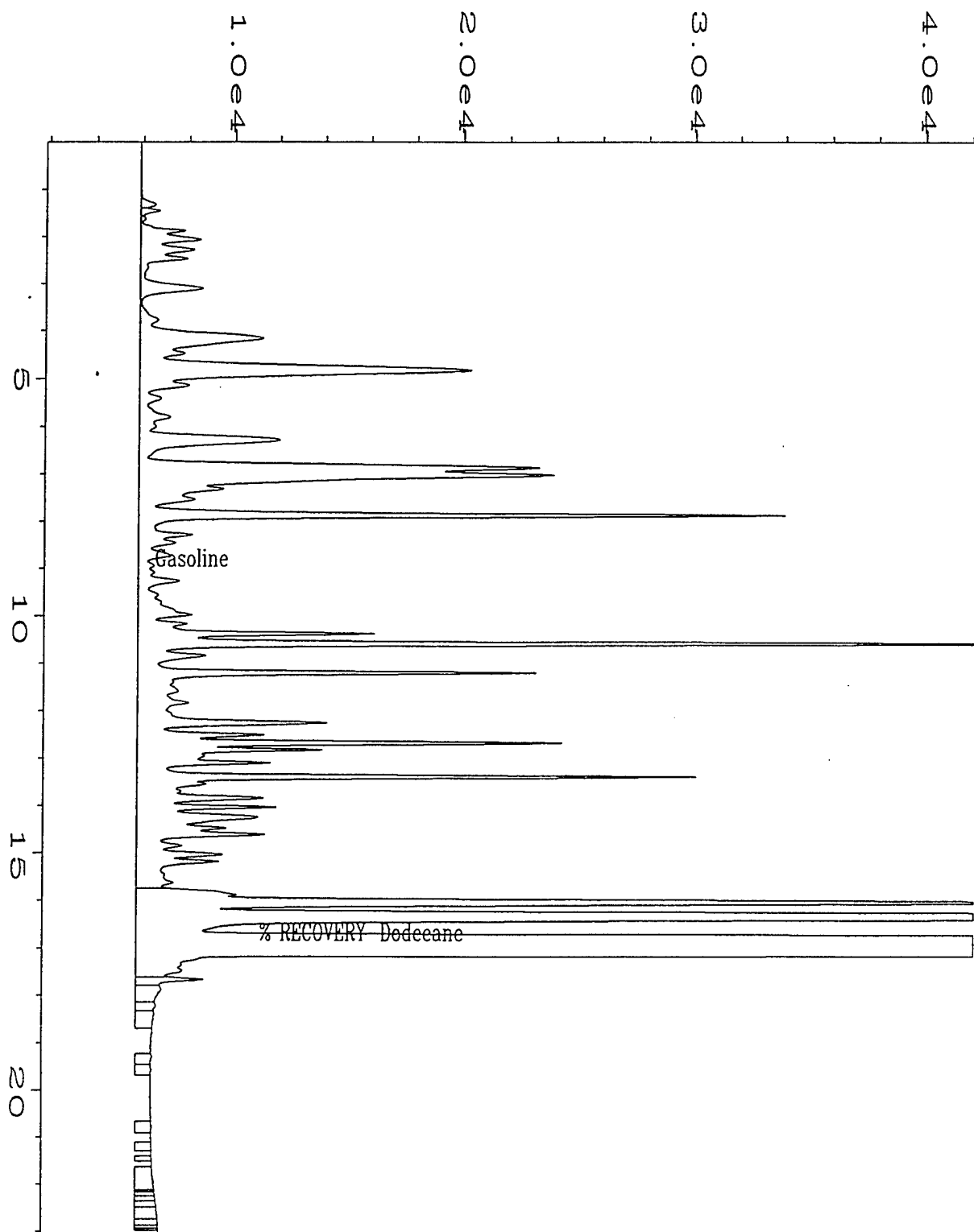

Analyst


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MSTV2193.XLS7/13/95



Data File Name	: C:\HPCHEM\1\DATA\TVH0711\017F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 17
Instrument	: TVH	Injection Number	: 1
Sample Name	: X08741D MS	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVHBAS
quired on	: 12 Jul 95 11:34 PM	Analysis Method	: TVH0711
port Created on:	: 13 Jul 95 02:01 PM	Sample Amount	: 0
Last Recalib on	: 13 JUL 95 01:51 PM	ISTD Amount	:
Multiplier	: 1		



Data File Name	: C:\HPCHEM\1\DATA\TVH0711\018F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 18
Instrument	: TVH	Injection Number	: 1
Sample Name	: X08741D MSD	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVHBASE.MTH
Acquired on	: 13 Jul 95 00:13 AM	Analysis Method	: TVH0711.MTH
Report Created on:	13 Jul 95 02:01 PM	Sample Amount	: 0
Last Recalib on	: 13 JUL 95 01:51 PM	ISTD Amount	:
Multiplier	: 1		

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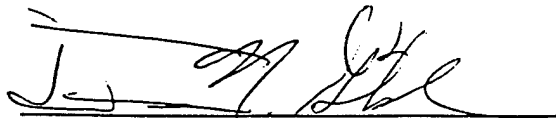
TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

LCS Number : LCS071195 Matrix : WATER
Date Prepared : 7/12/95 Method Numbers : EPA 5030/8015 Modified
Date Analyzed : 7/12/95
Sequence Number : 008F0101.D

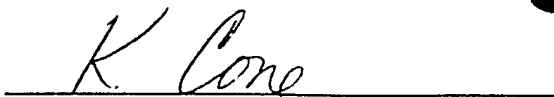
<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	2.00	2.34	117%	70%-130%

QUALIFIERS

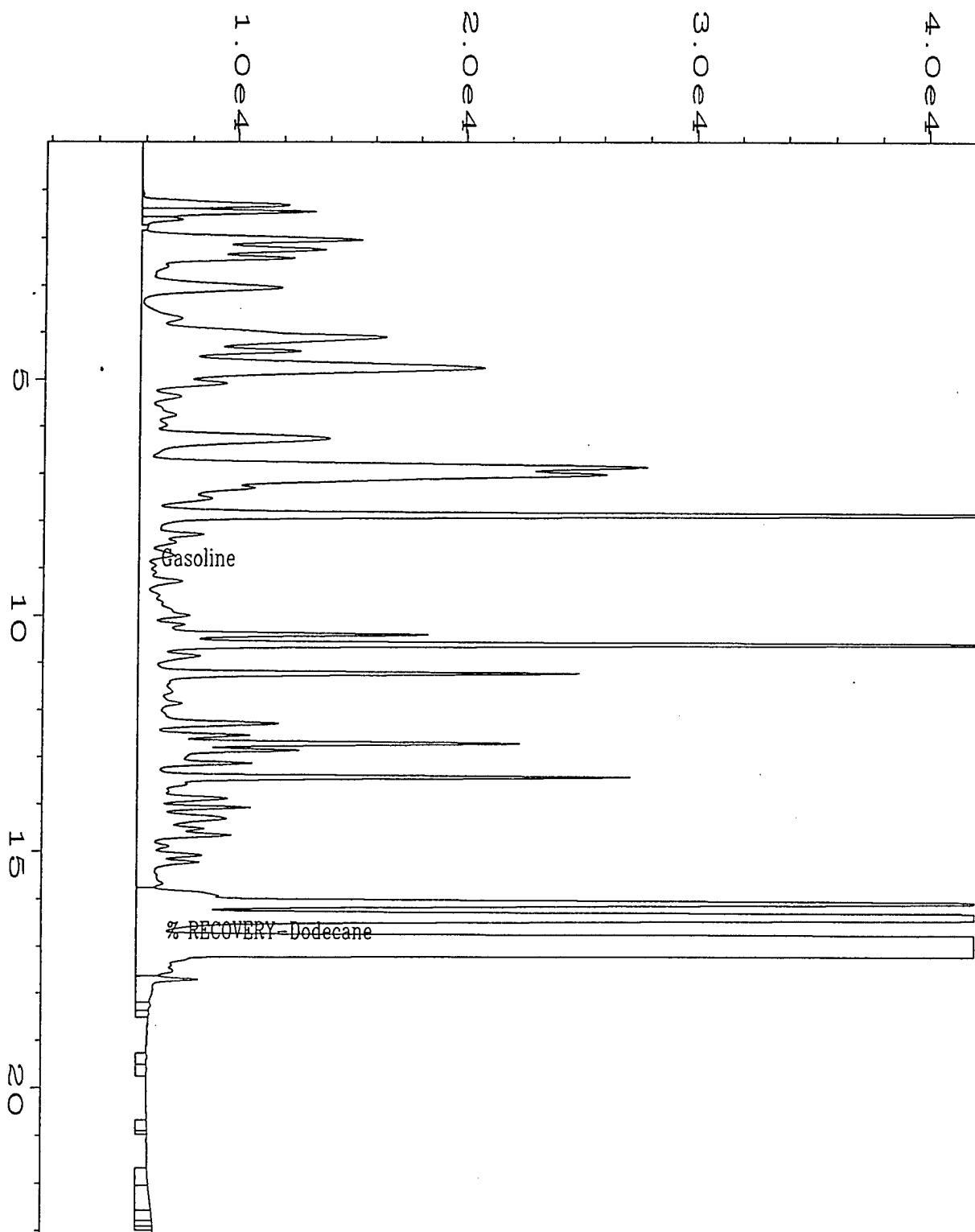
U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value. Exceeds calibration range.
NA = Not Available/Not Applicable.



Analyst



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Data File Name	: C:\HPCHEM\1\DATA\TVH0711\008F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 8
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS071195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVHBASE.MTH
Acquired on	: 12 Jul 95 05:40 PM	Analysis Method	: TVH0711.MTH
Report Created on	: 13 Jul 95 02:00 PM	Sample Amount	: 0
Last Recalib on	: 13 JUL 95 01:51 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: #1492		

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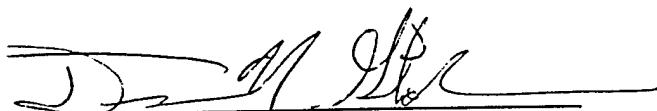
TOTAL EXTRACTABLE HYDROCARBONS (TEH as Jet Fuel)

Date Sampled	: 7/10/95	Client Project Number	: 722450.26
Date Received	: 7/11/95	Lab Project Number	: 95-2193
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/13,14/95	Method Number	: 3500/Mod.8015

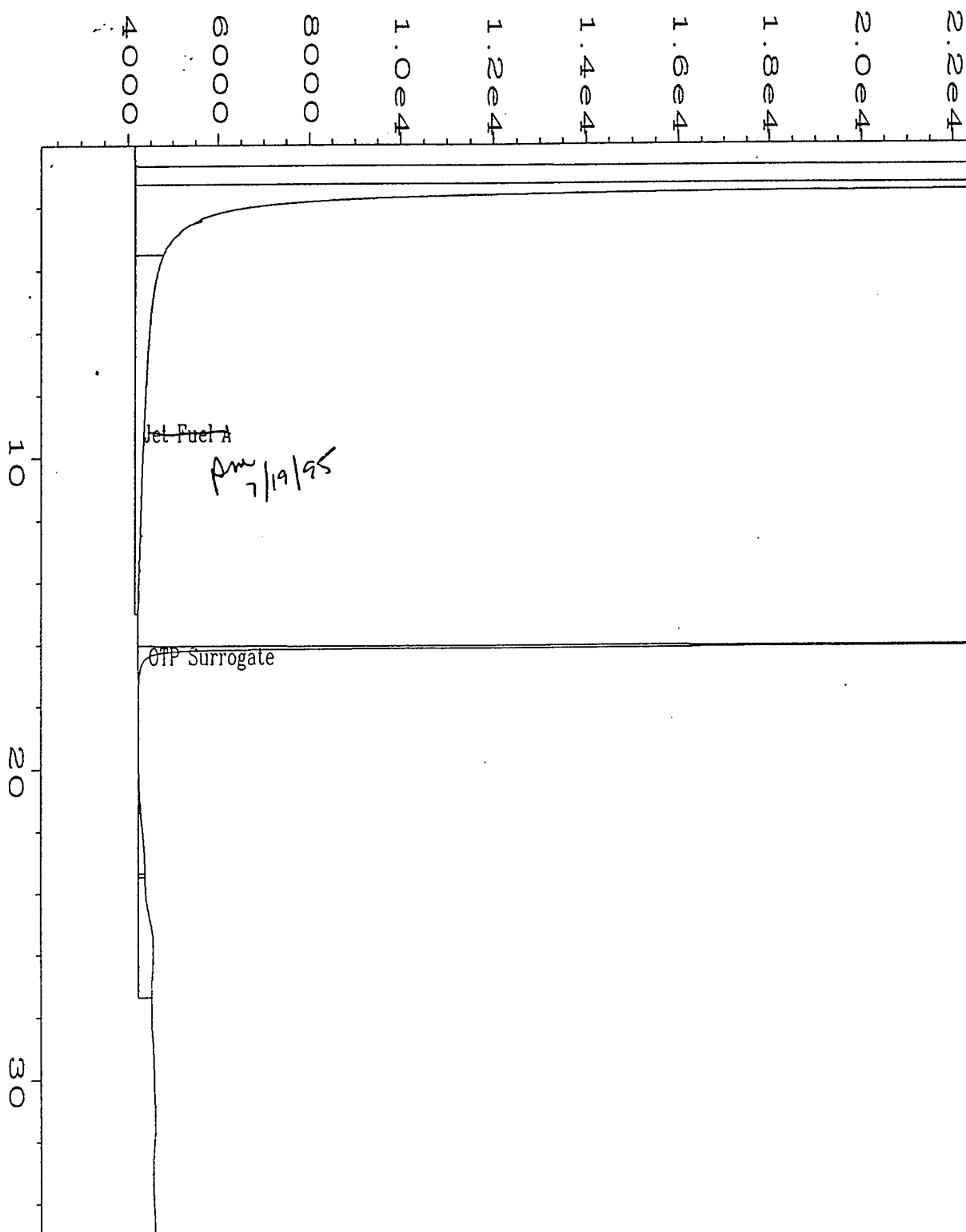
Evergreen Sample #	Client Sample #	Surrogate Recovery	TEH Jet Fuel mg/L	RL mg/L
WB071195	WATER METHOD BLANK	91%	U	0.5
X08735	MW-16	102%	U	0.5
X08736	MW-17	97%	U	0.5
X08737	MW-15	81%	U	0.5
X08738	MW-14	83%	U	0.5
X08739	MW-19	97%	U	0.5
X08740	MW-18	89%	U	0.5
X08741	MW-20	93%	U	0.5

QUALIFIERS

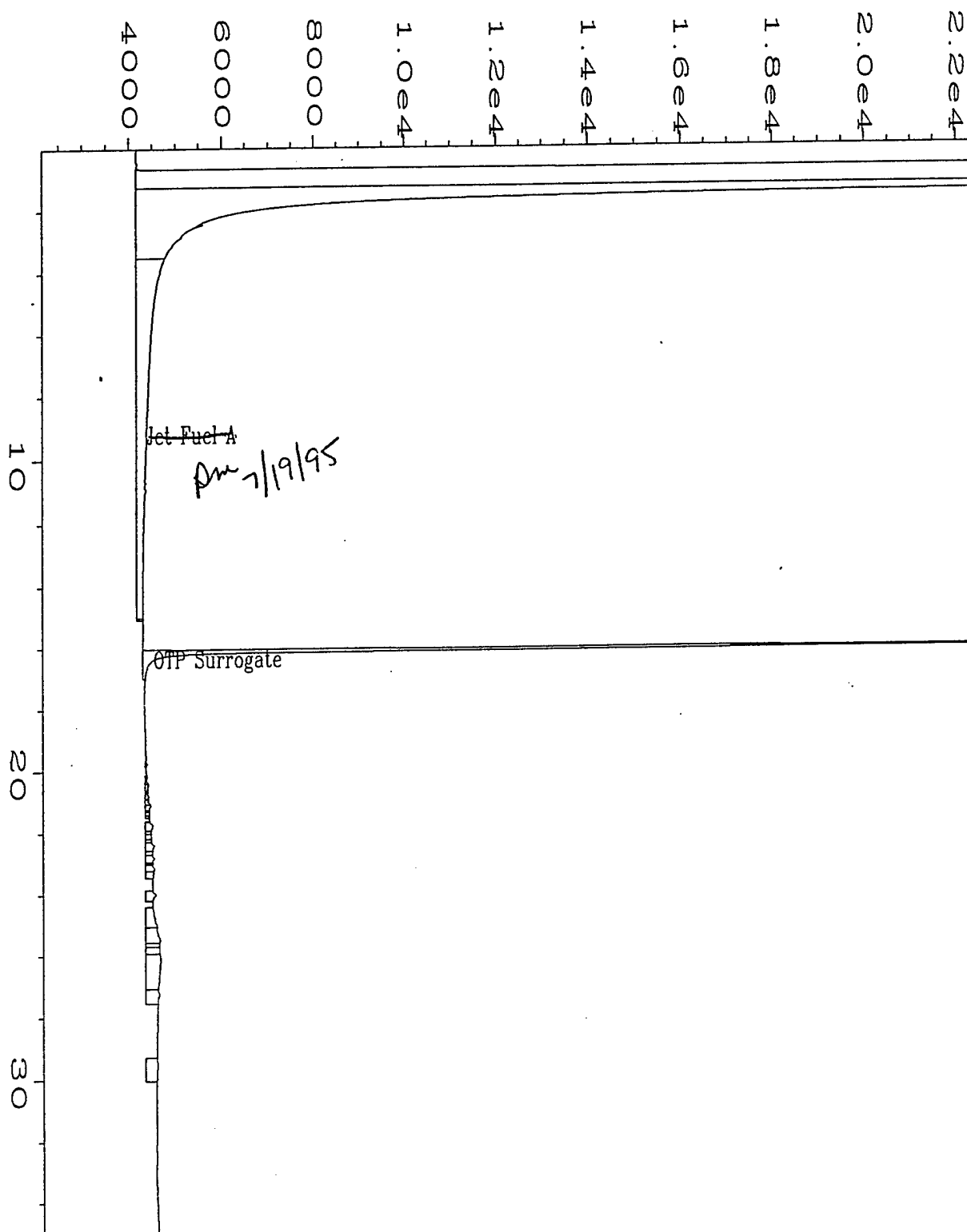
U = TEH as Jet Fuel analyzed for but not detected.
B = TEH as Jet Fuel found in blank also.
E = Extrapolated value.
RL = Reporting Limit


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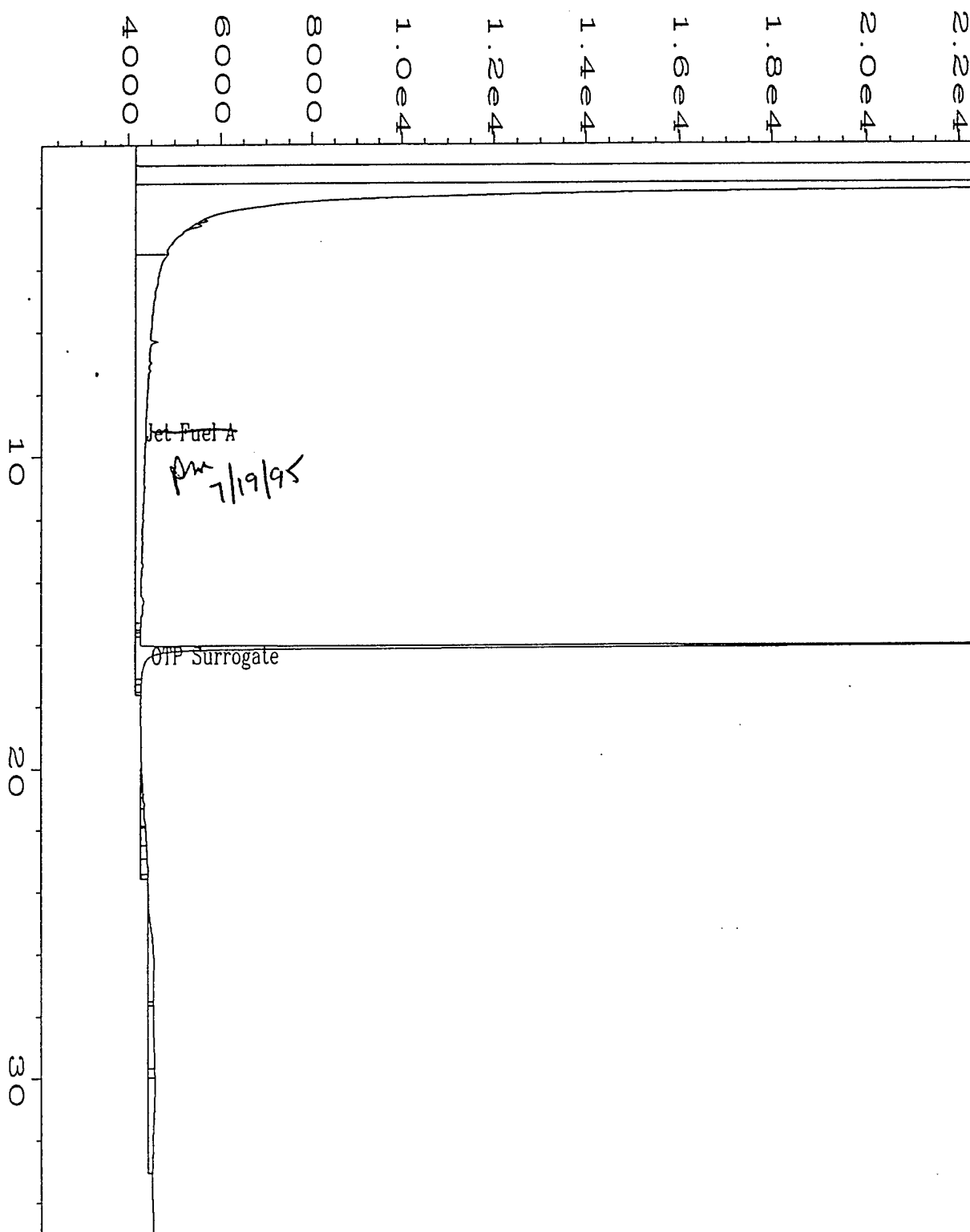


Data File Name	: C:\HPCHEM\2\DATA\JET0713\009R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 9
Instrument	: TEH	Injection Number	: 1
Sample Name	: WB071195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TEHBASE.MTH
Acquired on	: 13 Jul 95 08:25 PM	Analysis Method	: JET0713.MTH
Report Created on:	14 Jul 95 10:37 AM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 10:24 AM	ISTD Amount	:
Multiplier	: 1		

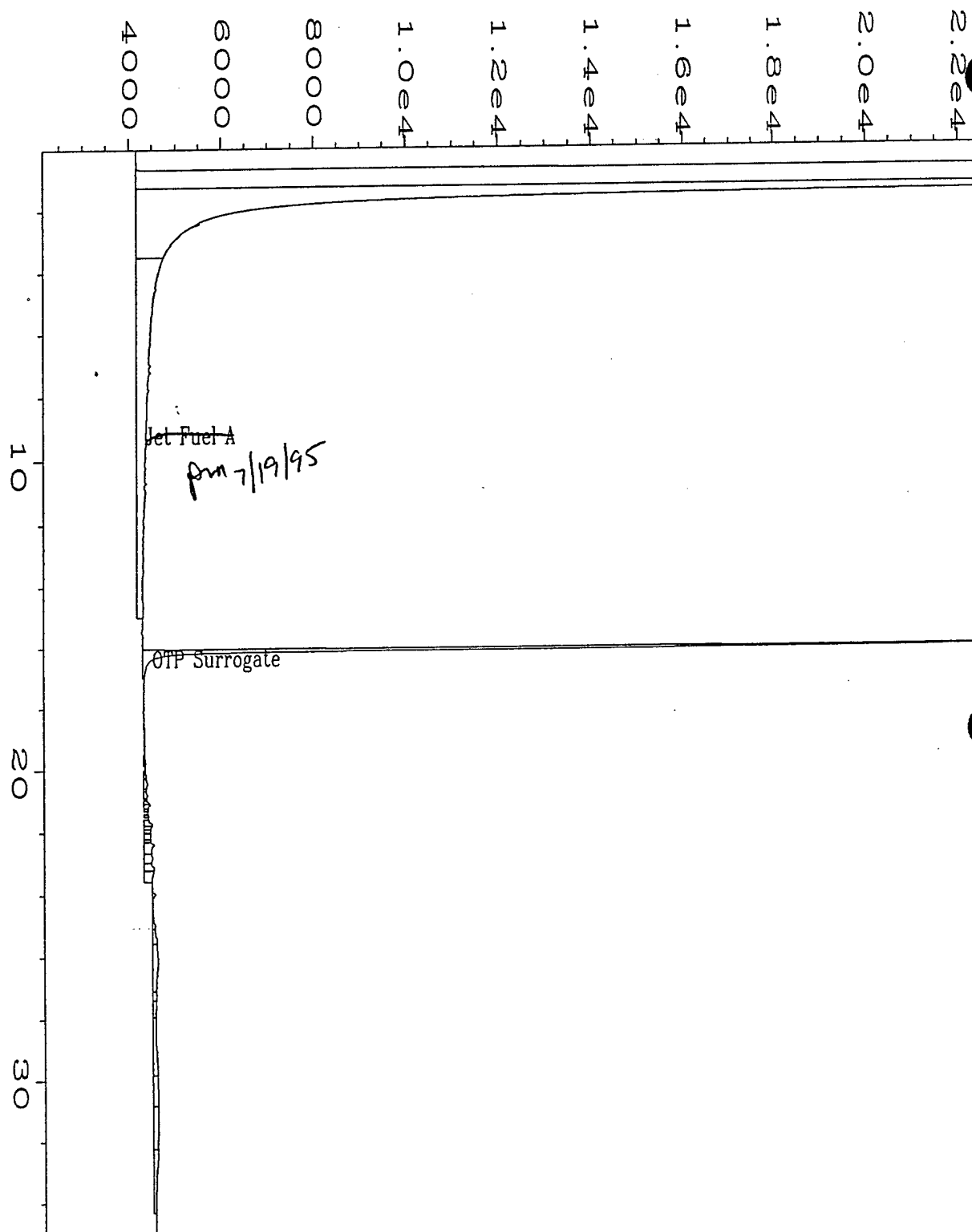


Data File Name	: C:\HPCHEM\2\DATA\JET0713\011R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 11
Instrument	: TEH	Injection Number	: 1
Sample Name	: X08735K;1	Sequence Line	: 1
Print Time Bar Code:		Instrument Method:	TEHBAS.MT
quired on	: 13 Jul 95 10:08 PM	Analysis Method	: JET0713.MT
Report Created on:	14 Jul 95 10:53 AM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 10:24 AM	ISTD Amount	:
Multiplier	: 1		

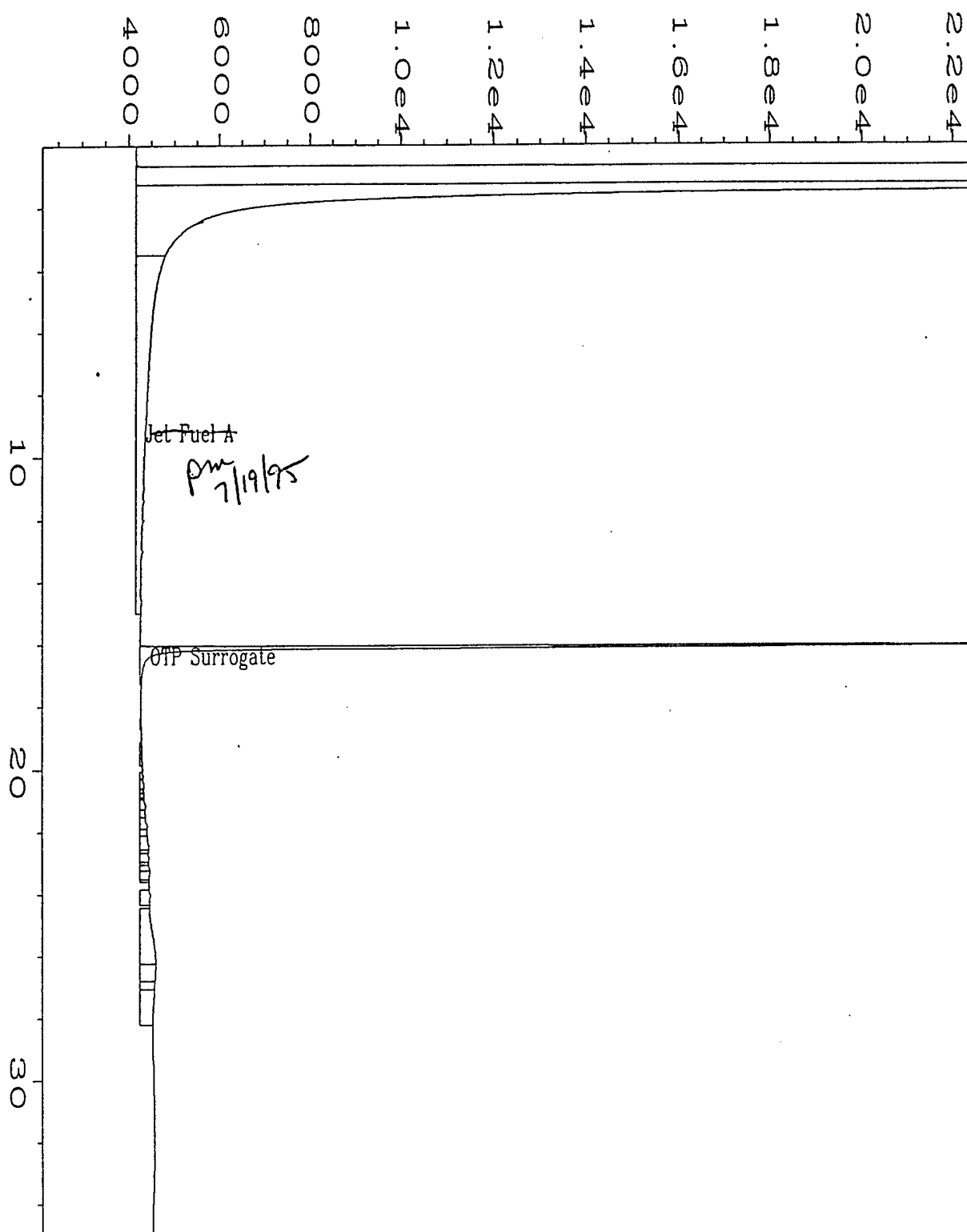
Client ID: MW-16



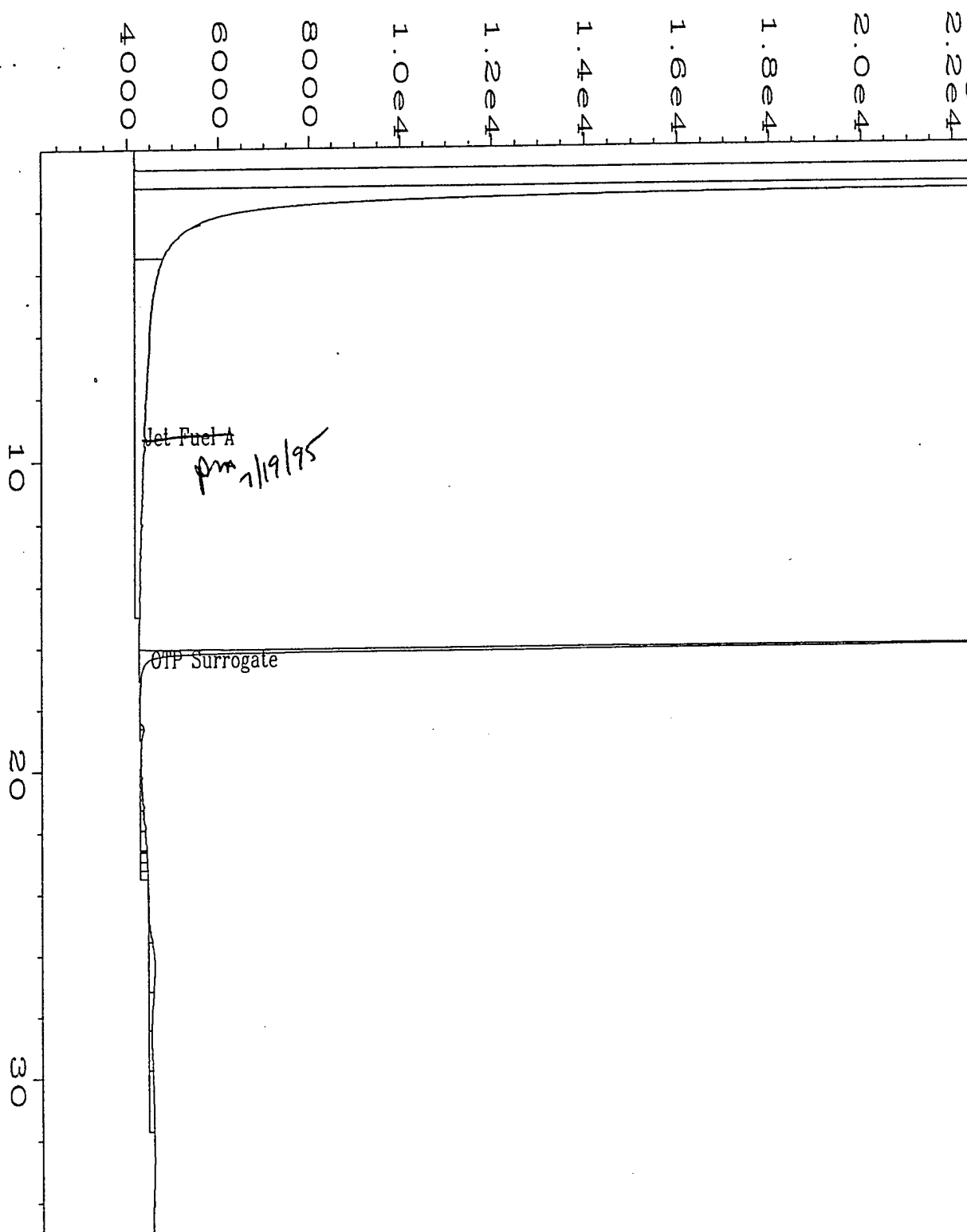
Data File Name	: C:\HPCHEM\2\DATA\JET0713\012R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 12
Instrument	: TEH	Injection Number	: 1
Sample Name	: X08736K;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TEHBASE.MTH
Required on	: 13 Jul 95 11:00 PM	Analysis Method	: JET0713.MTH
Report Created on	: 14 Jul 95 10:38 AM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 10:24 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-17;WATER		



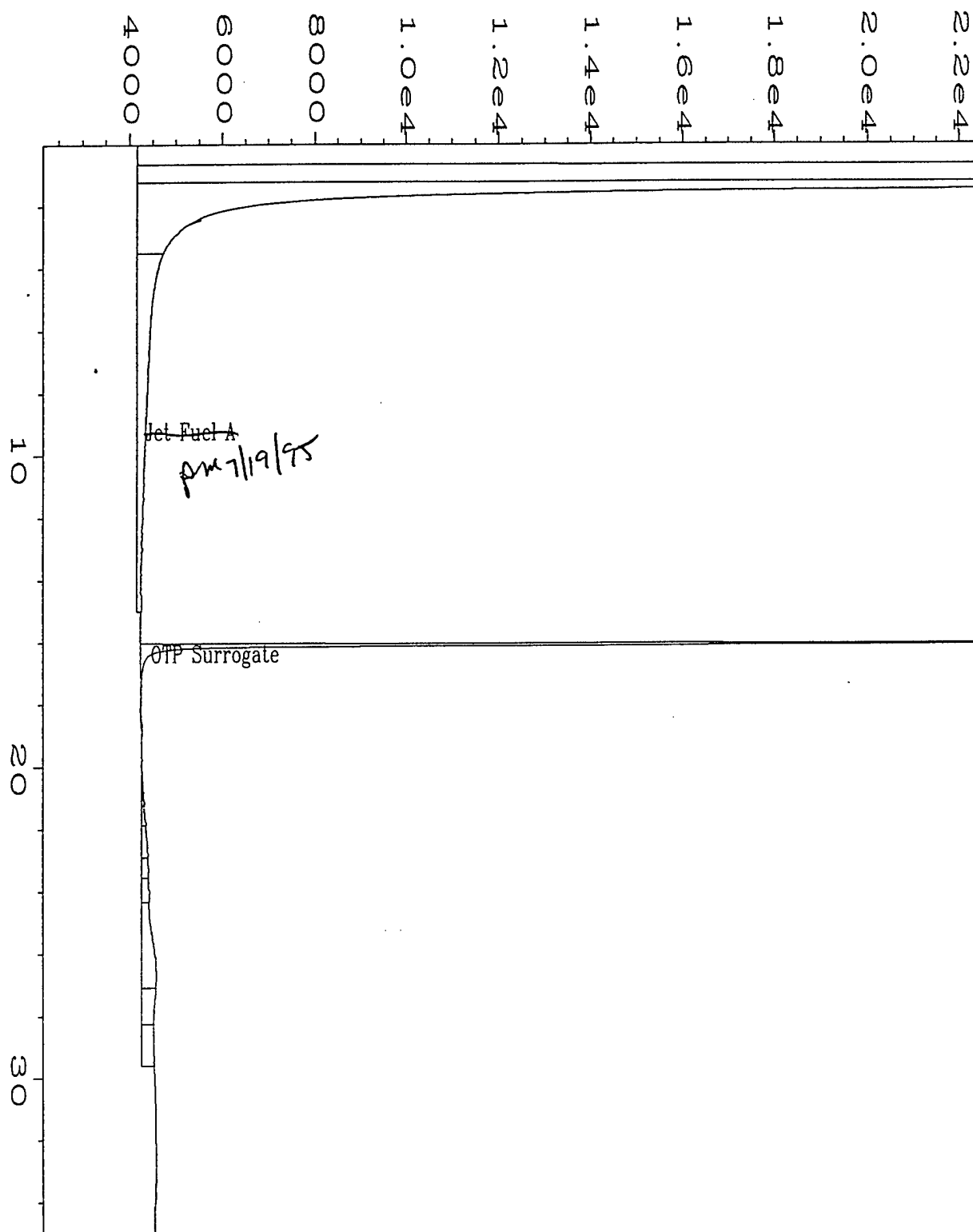
Data File Name	: C:\HPCHEM\2\DATA\JET0713\013R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 13
Instrument	: TEH	Injection Number	: 1
Sample Name	: X08737K;1	Sequence Line	: 1
Print Time Bar Code:		Instrument Method:	TEHBA.M
quired on	: 13 Jul 95 11:51 PM	Analysis Method	: JET0713.M
Report Created on:	14 Jul 95 10:38 AM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 10:24 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-15;WATER		



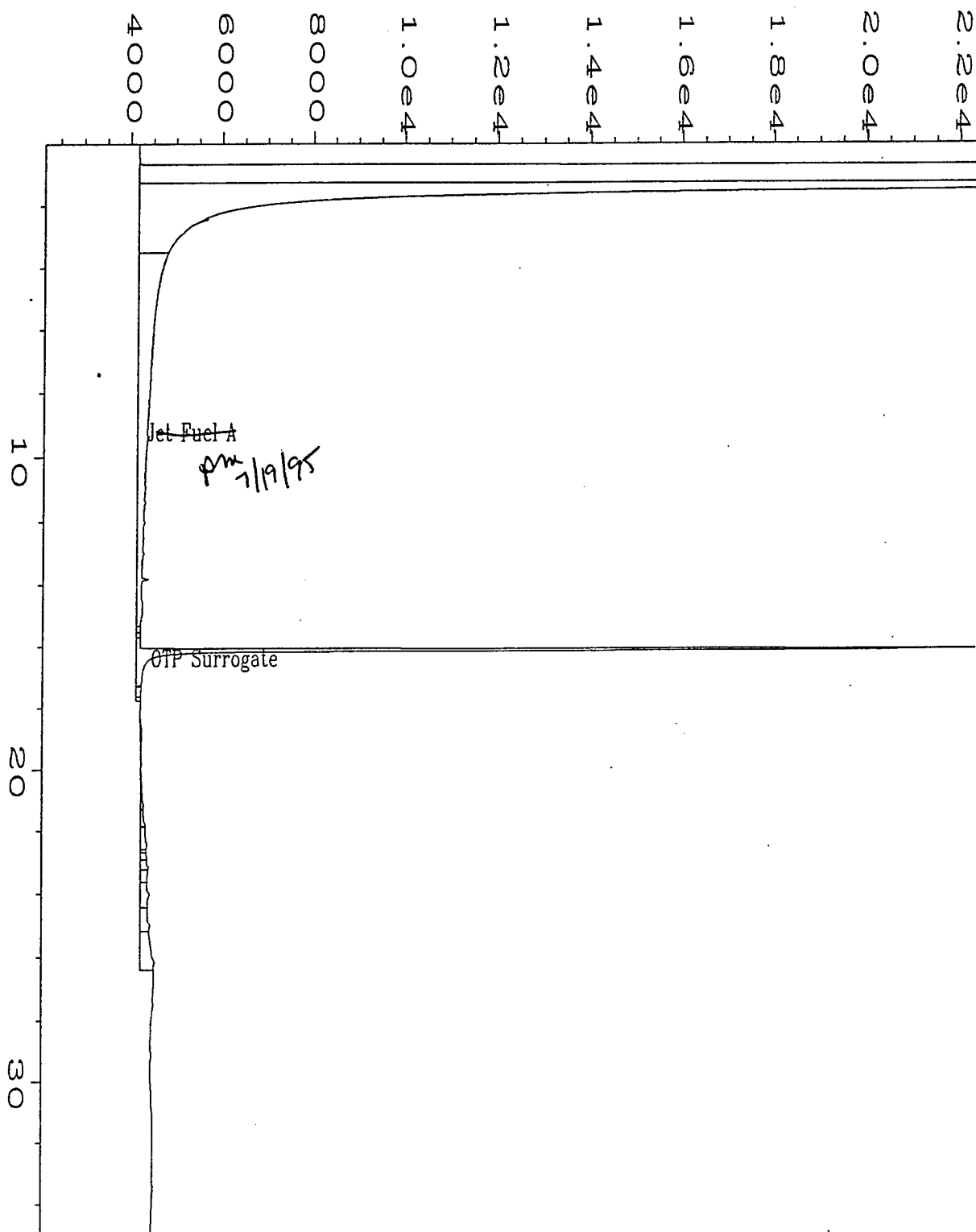
Data File Name	: C:\HPCHEM\2\DATA\JET0713\014R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 14
Instrument	: TEH	Injection Number	: 1
Sample Name	: X08738K;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TEHBASE.MTH
Acquired on	: 14 Jul 95 00:43 AM	Analysis Method	: JET0713.MTH
Report Created on:	14 Jul 95 10:38 AM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 10:24 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-14;WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0713\015R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 15
Instrument	: TEH	Injection Number	: 1
Sample Name	: X08739K;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TEHBAS
quired on	: 14 Jul 95 01:35 AM	Analysis Method	: JET071
Report Created on:	: 14 Jul 95 10:38 AM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 10:24 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-19;WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0713\016R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 16
Instrument	: TEH	Injection Number	: 1
Sample Name	: X08740K;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TEHBASE.MTH
Acquired on	: 14 Jul 95 02:26 AM	Analysis Method	: JET0713.MTH
Report Created on:	14 Jul 95 10:38 AM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 10:24 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-18;WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0713\017R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 17
Instrument	: TEH	Injection Number	: 1
Sample Name	: X08741K;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TEHBAS
Acquired on	: 14 Jul 95 03:18 AM	Analysis Method	: JET0713.MT
Report Created on:	14 Jul 95 10:38 AM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 10:24 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-20;WATER		

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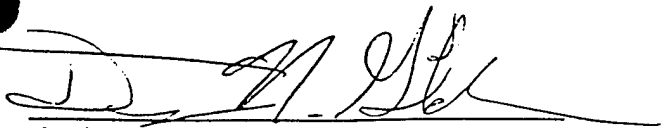
TOTAL EXTRACTABLE HYDROCARBONS (TEH as Jet Fuel)
Laboratory Control Sample (LCS)

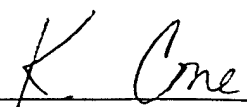
LCS Number : LCS071395 Matrix : WATER
Date Prepared : 7/13/95 Method Number : EPA 3500/8015 Modified
Date Analyzed : 7/13/95
Sequence Number : JET007R0101.D

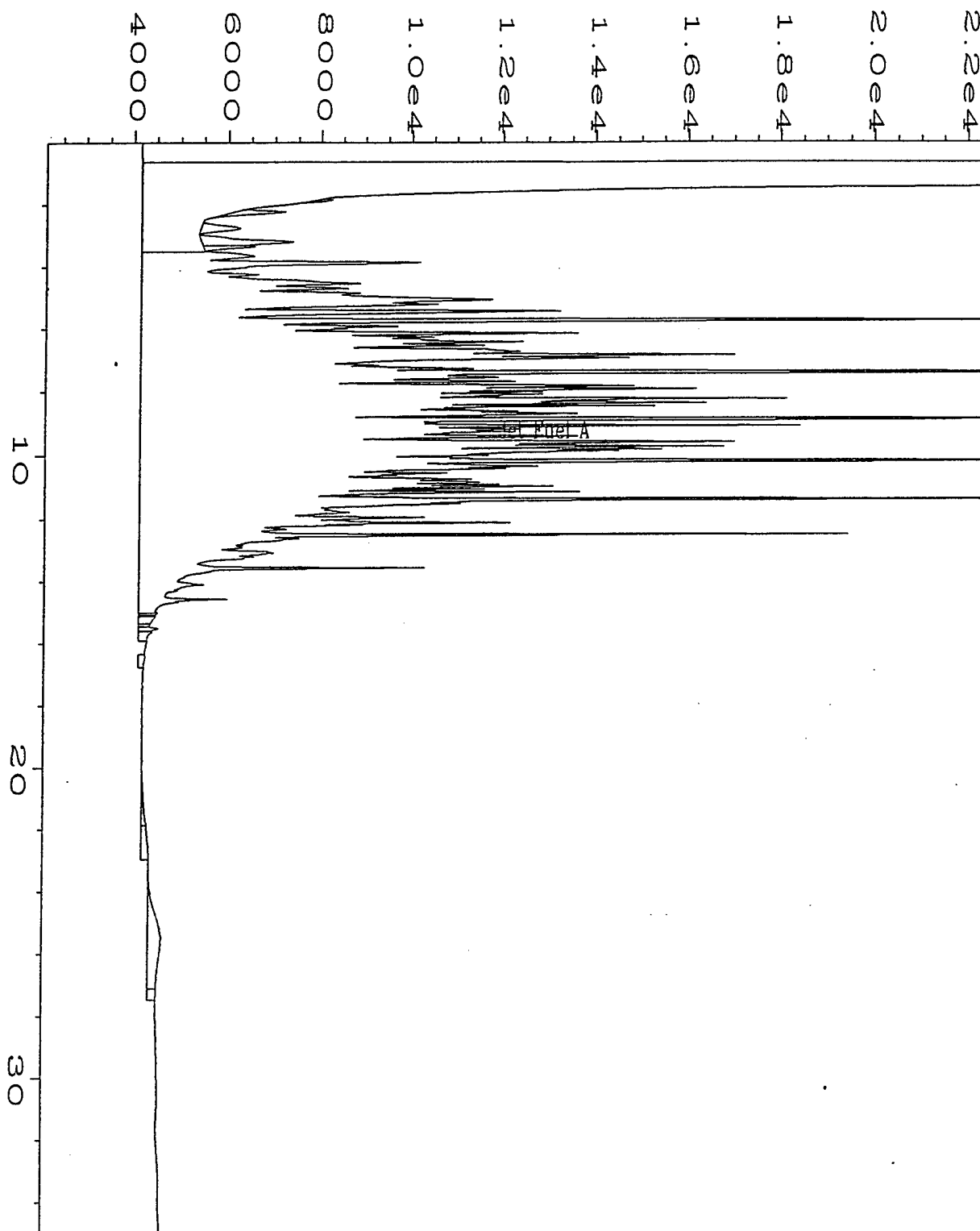
<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
JET FUEL	5000	5000	100%	70%-130%
OTP Surrogate % Recovery:				70%-130%

QUALIFIERS

U = TEH analyzed for but not detected.
B = TEH as Jet Fuel found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\JET0713\007R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 7
Instrument	: TEH	Injection Number	: 1
Sample Name	: LCS071395	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TEHBASE.MTH
Acquired on	: 13 Jul 95 06:41 PM	Analysis Method	: JET0713.MTH
Report Created on:	14 Jul 95 10:27 AM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 10:24 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: CAT.#31215;CAT.#A004154;RESTEK;5000 PPM		

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Methane Report Form
Method Blank Report

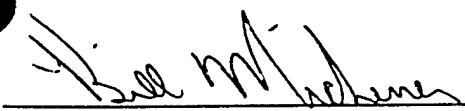
Method Blank Number : GB071495
Date Extracted/Prepared : 7/14/95
Date Analyzed : 7/14/95

Client Project No. : 722450.26
Lab Project No. : 95-2193
Dilution Factor : 1.00
Method : RSKSOP-175
Matrix : Water
Lab File No. : GAS0714002

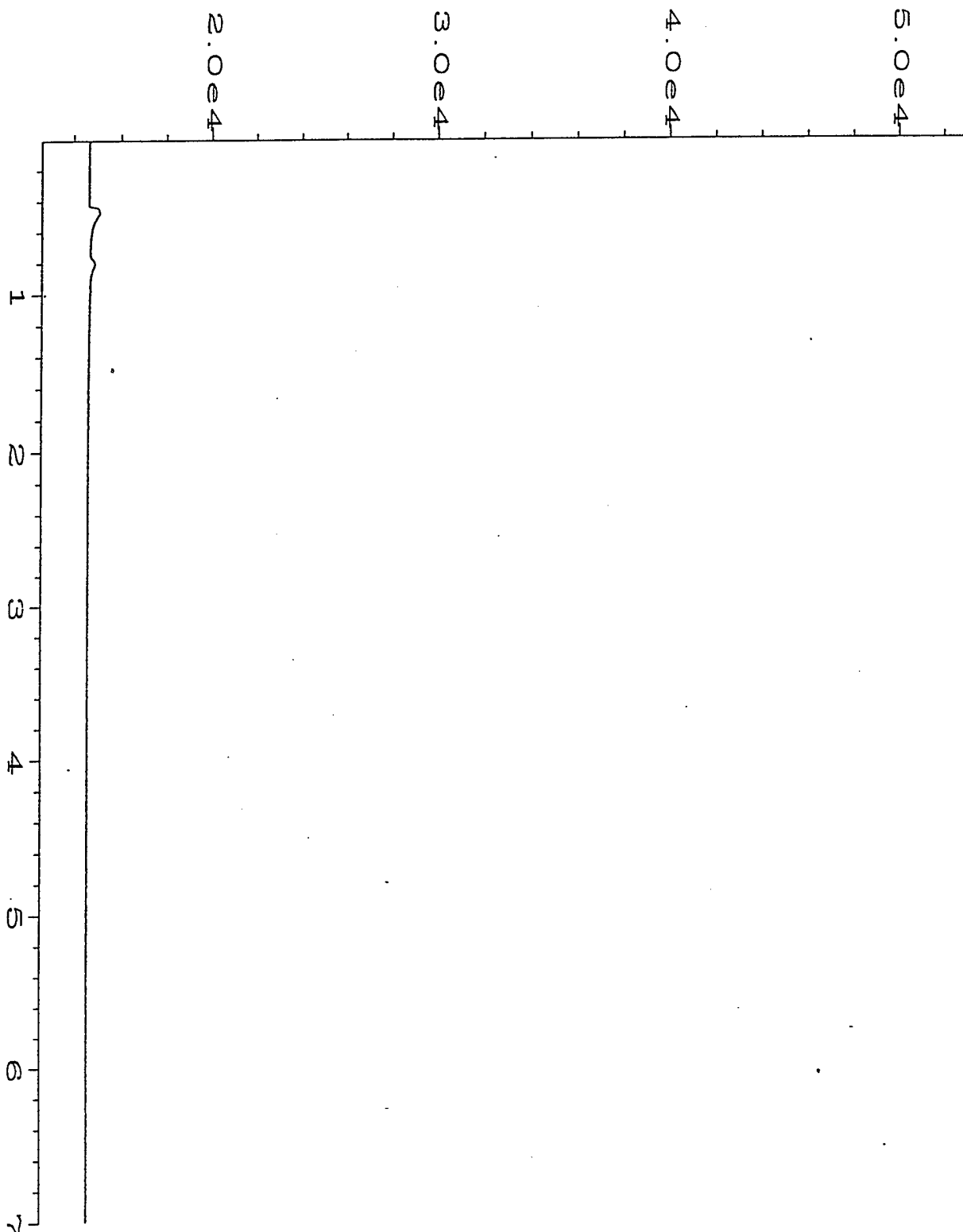
Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\GAS0714\002R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 2
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: GB071495	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	GASES.M
Aired on	: 14 Jul 95 08:02 AM	Analysis Method	: METH0714.MT
Report Created on:	14 Jul 95 01:58 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		

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Methane Report Form

Client Sample Number	: MW-16	Client Project No.	: 722450.26
Lab Sample Number	: X08735	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714010


Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.142	0.004

Temperature	: 73 F	Saturation	Meth	0.034148524
Amount Injected	: 0.5 ml	Concentration		
Total Volume of Sample	: 43 ml	Concentration	Meth	0.107392382
Head space created	: 4 ml	in Head Space		
Methane Area	: 794.107 ug			

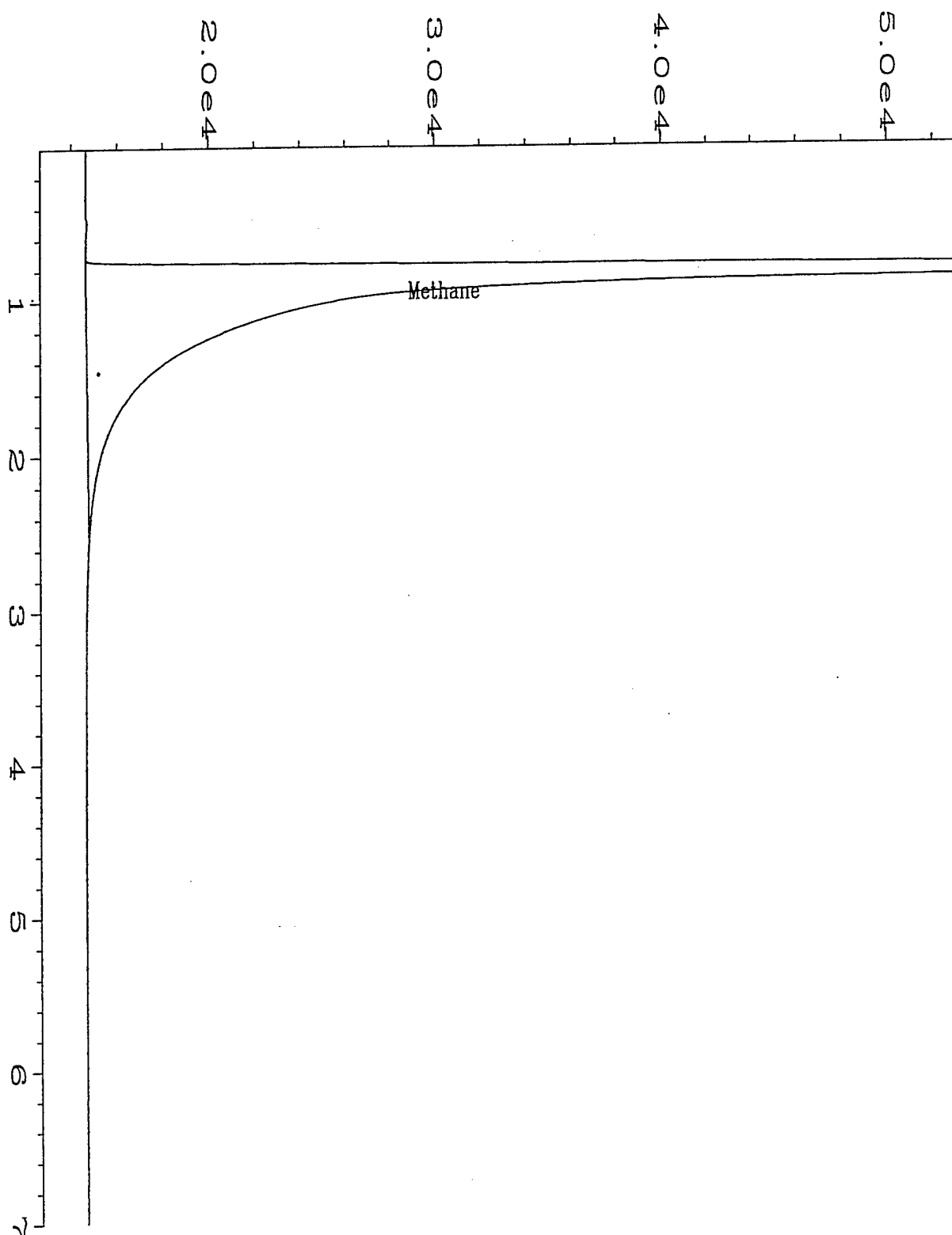
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0714\010R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 10
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X08735;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES.M
quired on	: 14 Jul 95 09:56 AM	Analysis Method	: METH071.M
Report Created on:	: 14 Jul 95 01:59 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-16;Water		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-17	Client Project No.	: 722450.26
Lab Sample Number	: X08736	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714011

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.006	0.004

Temperature	: 73.1 F	Saturation Meth	: 0.001504655
Amount Injected	: 0.5 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	: 0.004731042
Head space created	: 4 ml	in Head Space	
Methane Area	: 34.99 ug		

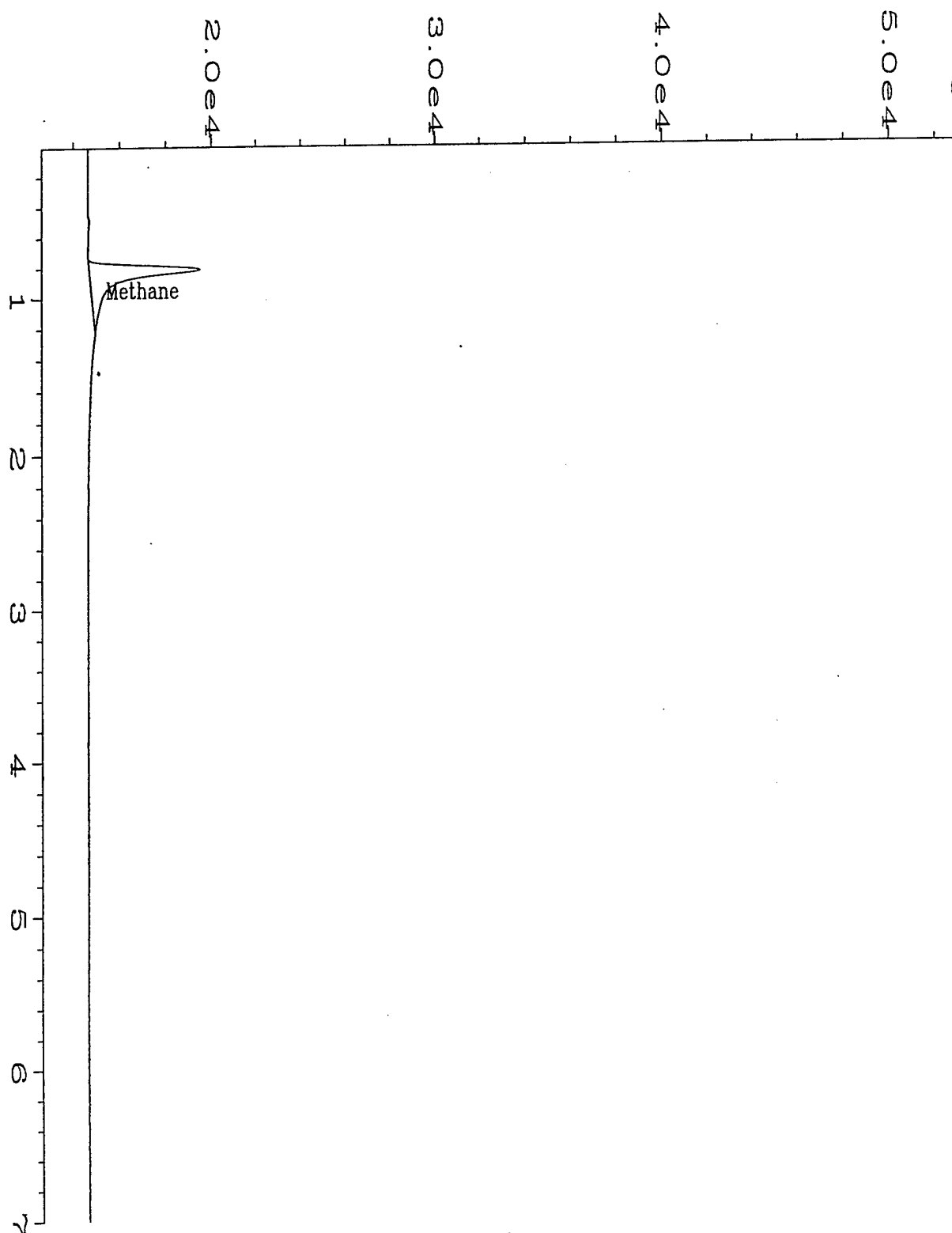
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0714\011R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 11
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X08736;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES
quired on	: 14 Jul 95 10:06 AM	Analysis Method	: METH0714.1
Report Created on:	: 14 Jul 95 01:59 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-17;Water		

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(303) 425-6021

Methane Report Form

Client Sample Number	: MW-17	Client Project No.	: 722450.26
Lab Sample Number	: X08736Dupl	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714012


Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.005	0.004

Temperature	: 73 F	Saturation Meth	0.001133888
Amount Injected	: 0.5 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	0.00356592
Head space created	: 4 ml	in Head Space	
Methane Area	: 26.368 ug		

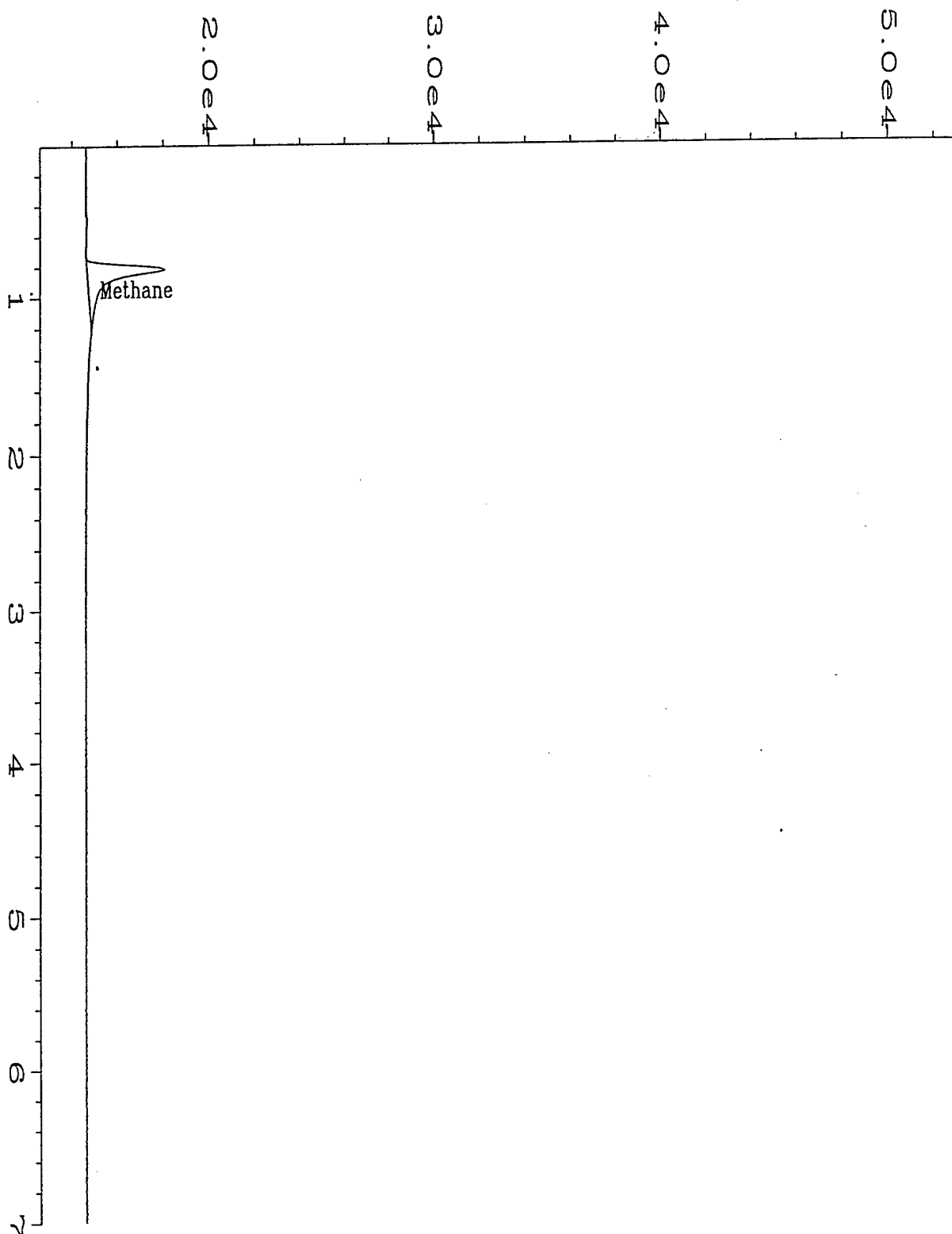
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0714\012R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 12
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X08736Dupl;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	GASES
quired on	: 14 Jul 95 10:14 AM	Analysis Method	: METH0714.1
Report Created on:	14 Jul 95 01:59 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-17;Water		

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(303) 425-6021

Methane Report Form

Client Sample Number	: MW-15	Client Project No.	: 722450.26
Lab Sample Number	: X08737	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714013

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 71.9 F	Saturation	Meth	0
Amount Injected	: 0.5 ml	Concentration		
Total Volume of Sample	: 43 ml	Concentration	Meth	C
Head space created	: 4 ml	in Head Space		
Methane Area	: 0 ug			

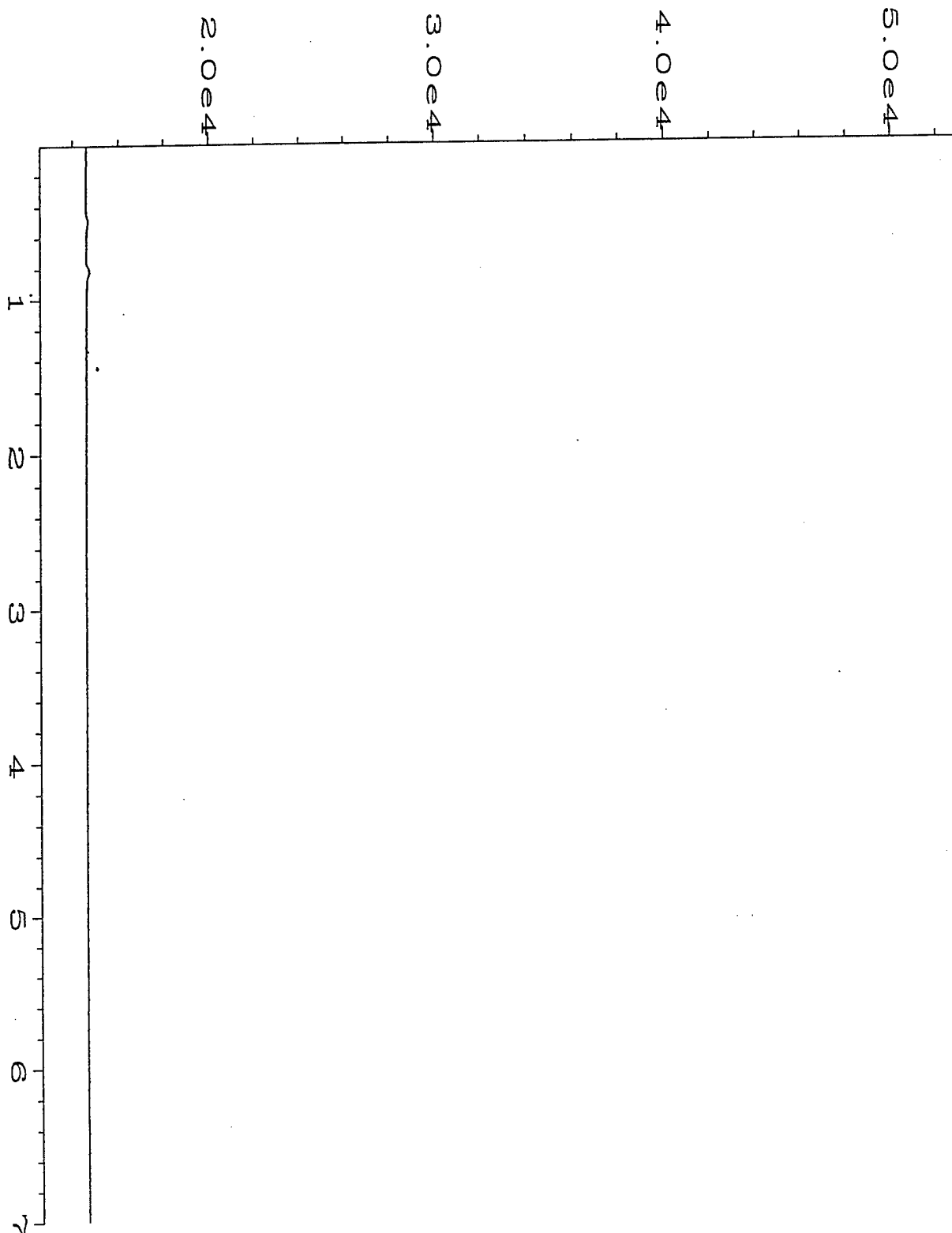
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0714\013R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 13
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X08737;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES
quired on	: 14 Jul 95 10:22 AM	Analysis Method	: METH07
Report Created on:	: 14 Jul 95 01:59 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-15;Water		

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(303) 425-6021

Methane Report Form

Client Sample Number	: MW-14	Client Project No.	: 722450.26
Lab Sample Number	: X08738	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714014


Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 72.2 F	Saturation	Meth	0
Amount Injected	: 0.5 ml	Concentration		
Total Volume of Sample	: 43 ml	Concentration	Meth	0
Head space created	: 4 ml	in Head Space		
Methane Area	: 0 ug			

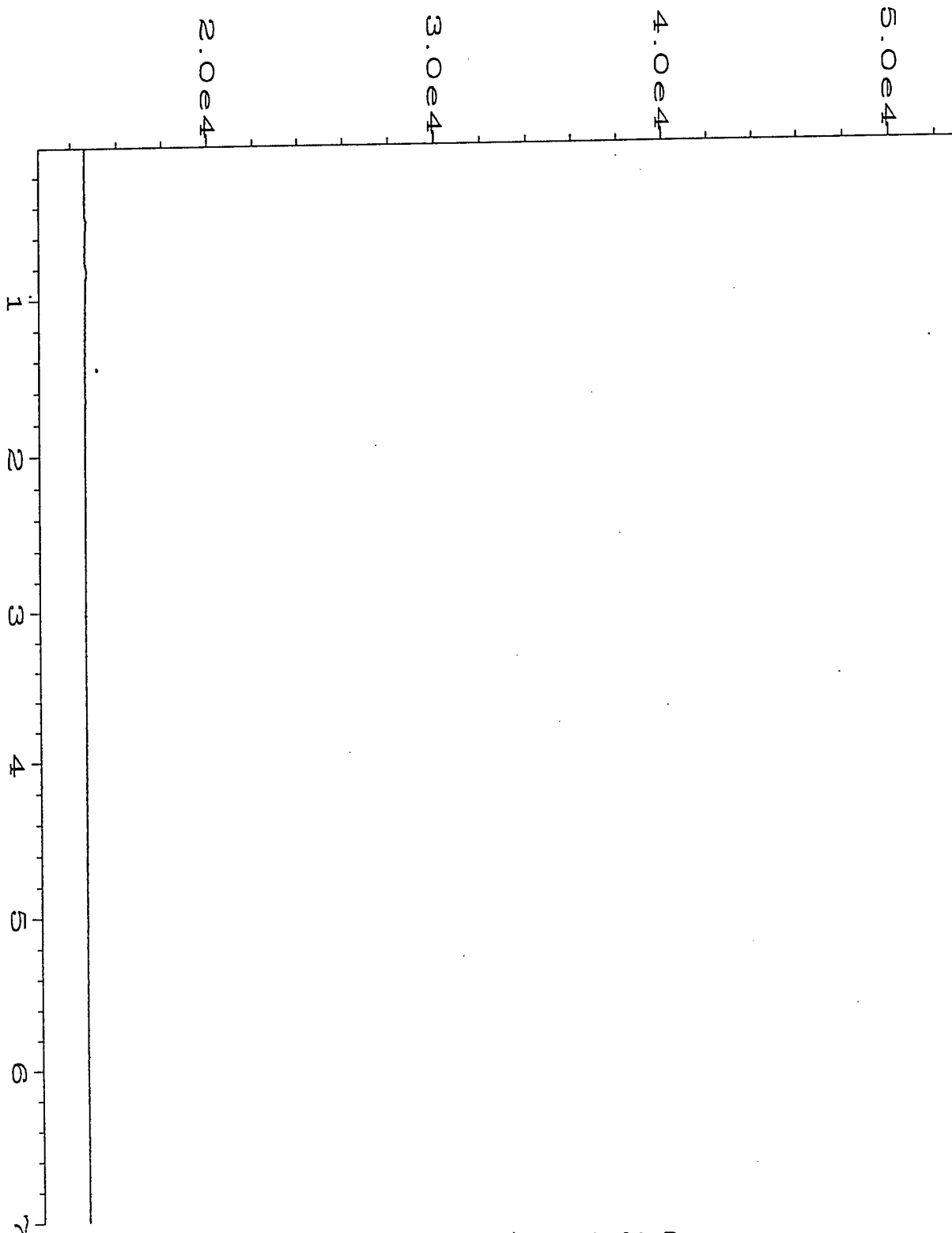
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0714\014R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 14
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X08738;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES
quired on	: 14 Jul 95 10:31 AM	Analysis Method	: METH07
Report Created on:	: 14 Jul 95 01:59 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-14;Water		

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Methane Report Form

Client Sample Number	: MW-19	Client Project No.	: 722450.26
Lab Sample Number	: X08739	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714015

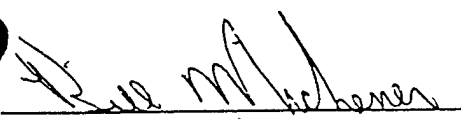
Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.046	0.004

Temperature	: 72.7 F	Saturation Meth	: 0.011132209
Amount Injected	: 0.5 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	: 0.035028995
Head space created	: 4 ml	in Head Space	
Methane Area	: 258.874 ug		

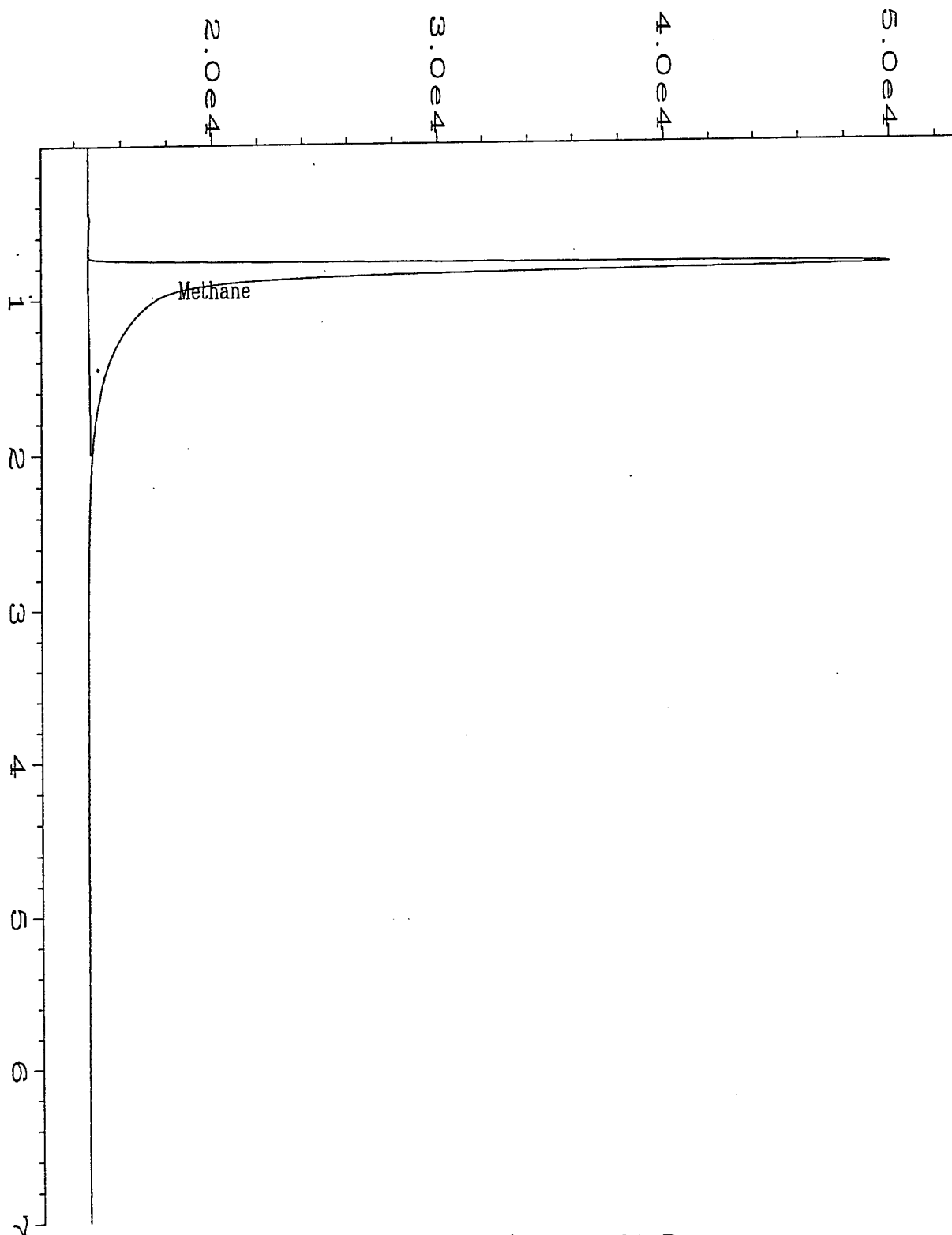
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\GAS0714\015R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 15
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X08739;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES
quired on	: 14 Jul 95 10:38 AM	Analysis Method	: METH07
Report Created on:	: 14 Jul 95 01:59 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-19;Water		

EVERGREEN ANALYTICAL, INC.
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Methane Report Form

Client Sample Number	: MW-18	Client Project No.	: 722450.26
Lab Sample Number	: X08740	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714016


Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 73 F	Saturation	Meth	0
Amount Injected	: 0.5 ml	Concentration		
Total Volume of Sample	: 43 ml	Concentration	Meth	0
Head space created	: 4 ml	in Head Space		
Methane Area	: 0 ug			

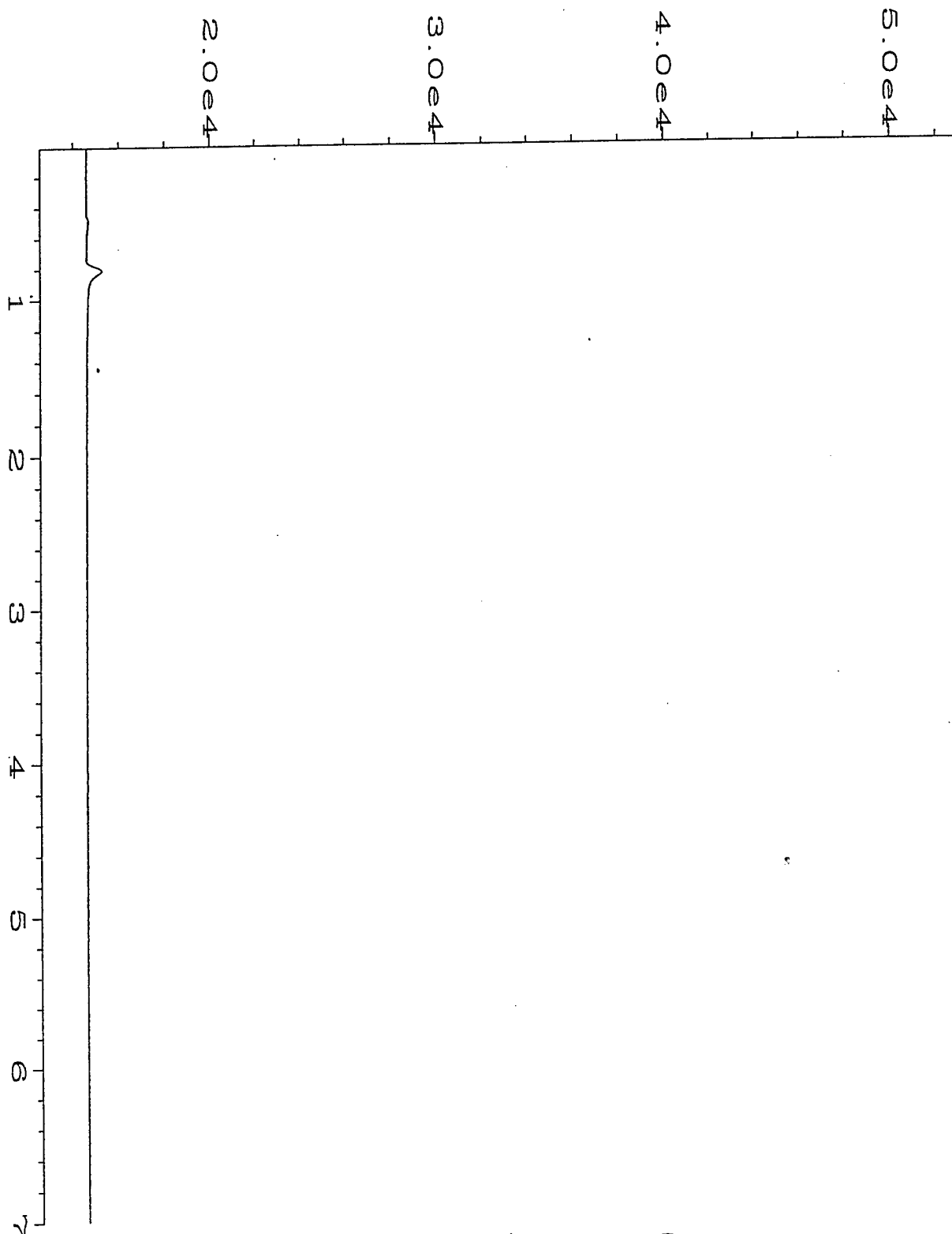
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0714\016R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 16
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X08740;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES
quired on	: 14 Jul 95 10:46 AM	Analysis Method	: METH0714.D
Report Created on:	: 14 Jul 95 01:59 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-18;Water		

EVERGREEN ANALYTICAL, INC.
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Methane Report Form

Client Sample Number	: MW-20	Client Project No.	: 722450.26
Lab Sample Number	: X08741	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714017

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004


Temperature	: 72.9 F	Saturation	Meth	0
Amount Injected	: 0.5 ml	Concentration		
Total Volume of Sample	: 43 ml	Concentration	Meth	0
Head space created	: 4 ml	in Head Space		
Methane Area	: 0 ug			

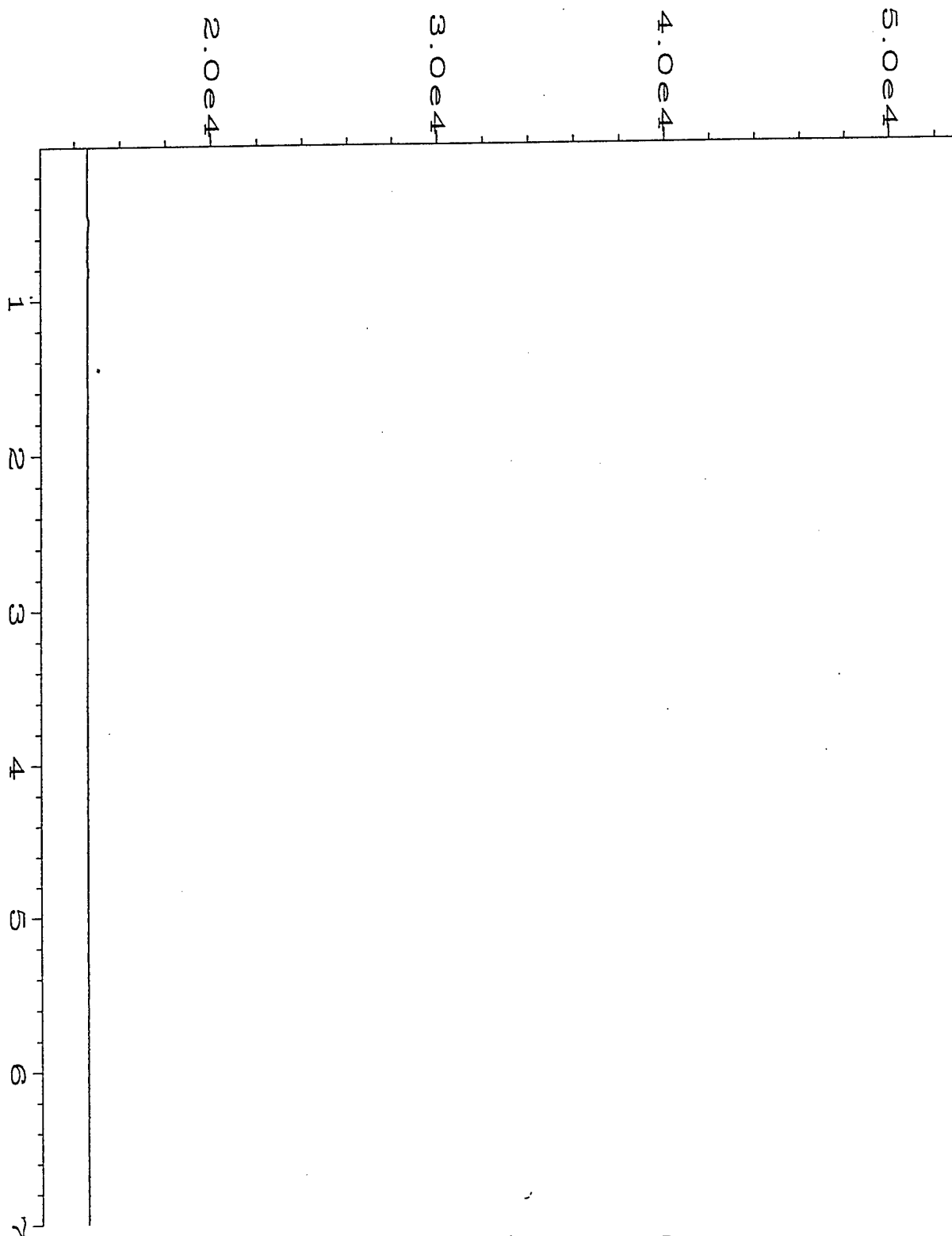
Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0714\017R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 17
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X08741;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES
quired on	: 14 Jul 95 10:56 AM	Analysis Method	: METH07
Report Created on:	: 14 Jul 95 01:59 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-20;Water		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

RSK-175 Gas Method
Methane Gas Matrix Spike / Matrix Spike Duplicate Report

Client Sample No. : MW-15 Client Project No. : 722450.26
Lab Sample No. : X08737 Lab Project No. : 95-2193
Date Sampled : 7/10/95 EPA Method No. : RSK-175
Date Received : 7/11/95 Matrix : Water
Date Prepared : 7/14/95 Method Blank : GB071495
Date Analyzed : 7/14/95 Lab File No's. : GAS0714024,025
E.A. MS/MSD Spike Source No. : 1723

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Methane Gas	500	0	331	66	N/A

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Methane Gas	500	328	66	1.7	N/A	N/A


RPD: 0 out of (1) outside limits.
Spike Recovery: 0 out of (2) outside limits.

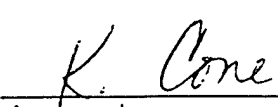
NOTES:

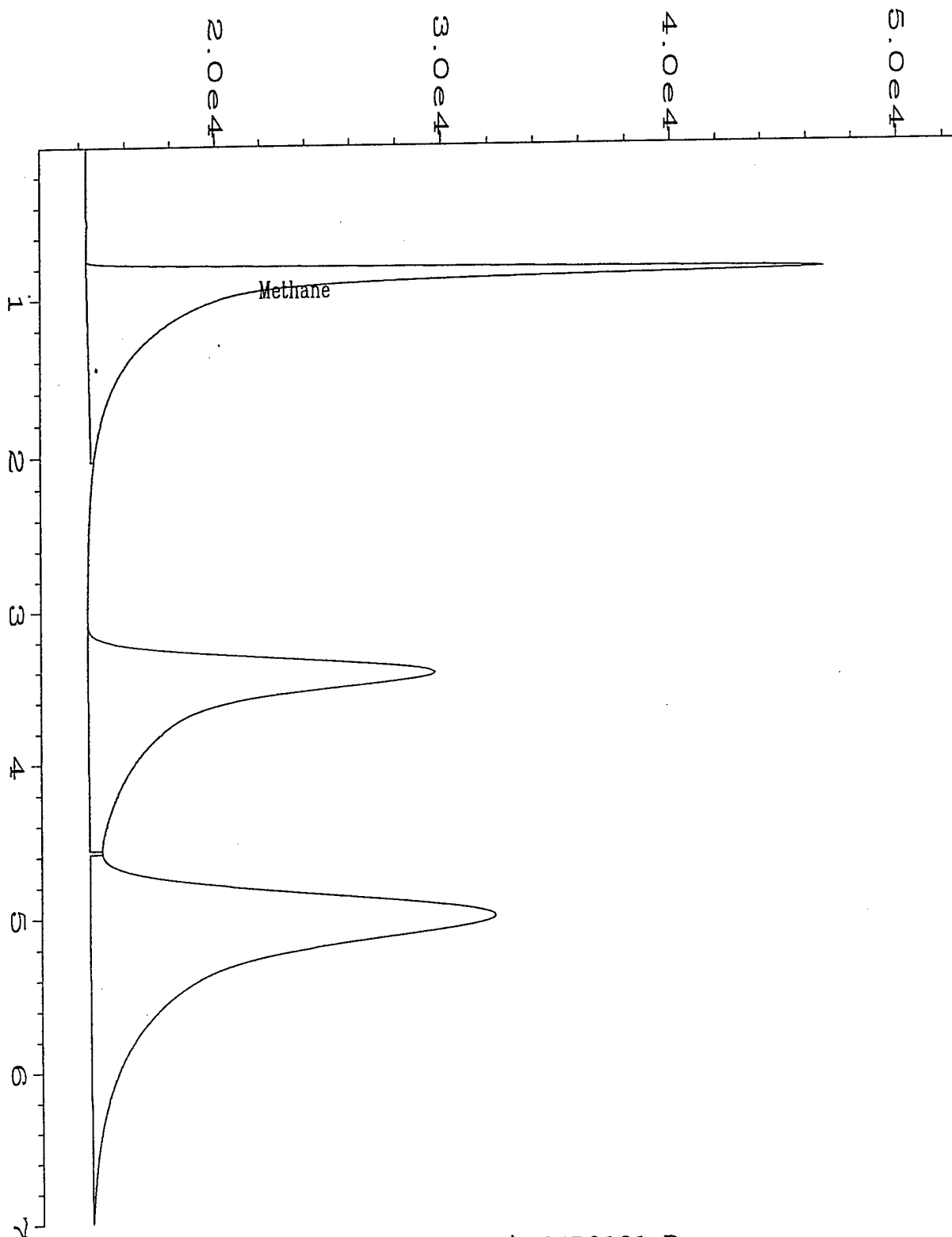
* = Values outside of QC limits.

NA = Not analyzed/not available

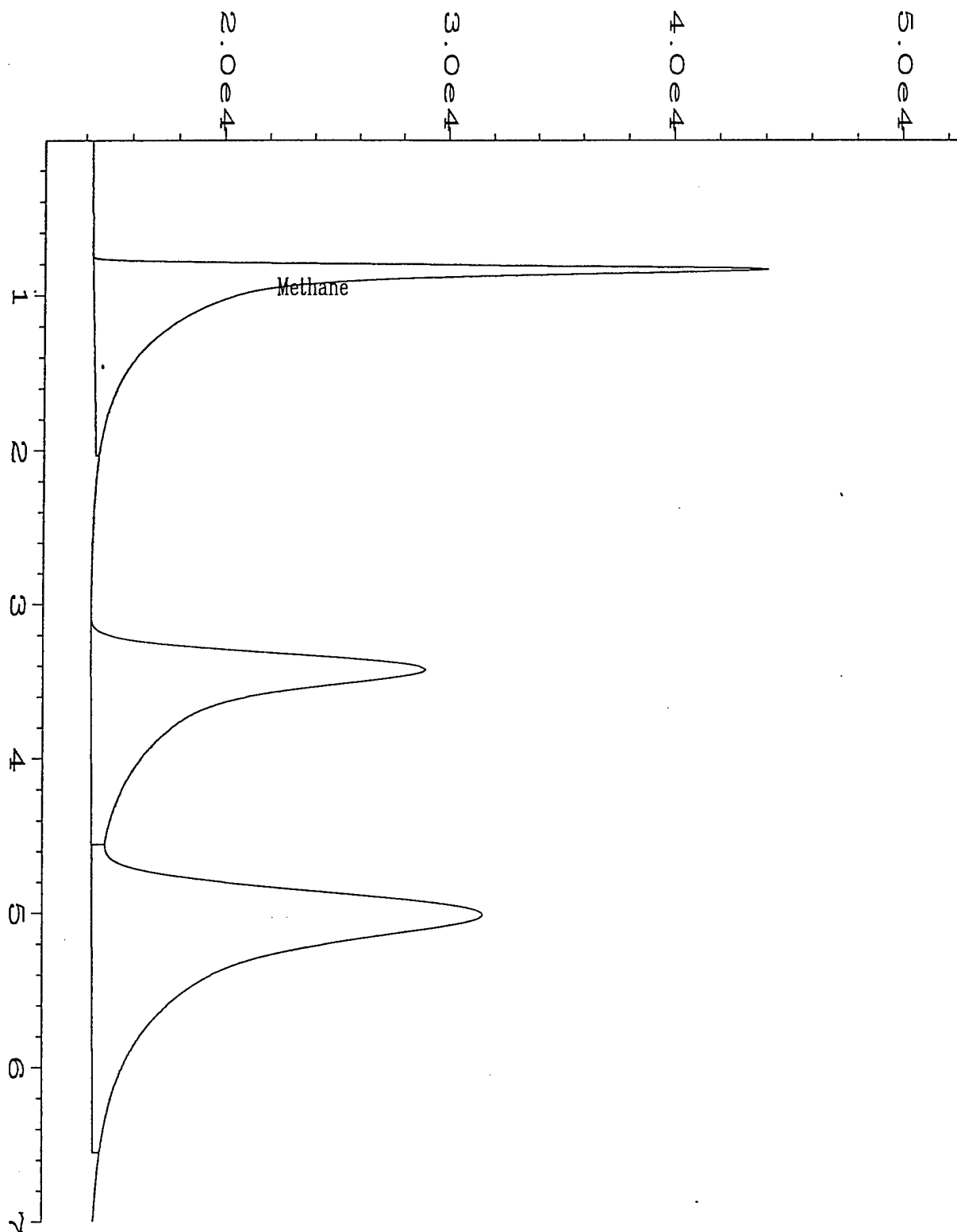
Note: The Spike was made by taking the sample and displacing 4ml of headspace with a 1% methane gas and shaking the VOA for 5 minutes. Then injecting 50 ul from the headspace into the GC resulting in a theoretical concentration of 500 ppm.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0714\024R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 24
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X08737MS;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES
quired on	: 14 Jul 95 12:59 PM	Analysis Method	: METH0714.1
Report Created on:	: 14 Jul 95 02:00 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-15;1%(4mlHeadSpace) inject 50ul(500ppm Matrix Spike) Water		



Data File Name	: C:\HPCHEM\2\DATA\GAS0714\025R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 25
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: X08737MSDupl;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: GASES.MTH
Acquired on	: 14 Jul 95 01:32 PM	Analysis Method	: METH0714.MTH
Report Created on	: 14 Jul 95 02:00 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-2193;MW-15;1%(4mlHeadSpace) inject 50ul(500ppm Matrix Spike) Water		

Evergreen Analytical, Inc.
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(303) 425-6021

RSK-175 Gas Method
Methane LCS Report Form

LCS No. : LCS071495 EPA Method No. : RSK-175
Date Prepared : 7/14/95 Matrix : Water
Date Analyzed : 7/14/95 Method Blank : GB071495
E.A. LCS Source No. : 1723 Lab File No. : GAS0714009

Compound	Spike Added (mg/L)	Method Blank Concentration (mg/L)	LCS Concentration (mg/L)	LCS %REC	QC Limits %REC
Methane Gas	500	0	548	110	N/A

Spike Recovery: 0 out of (1) outside limits.

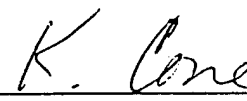
NOTES:

* = Values outside of QC limits.

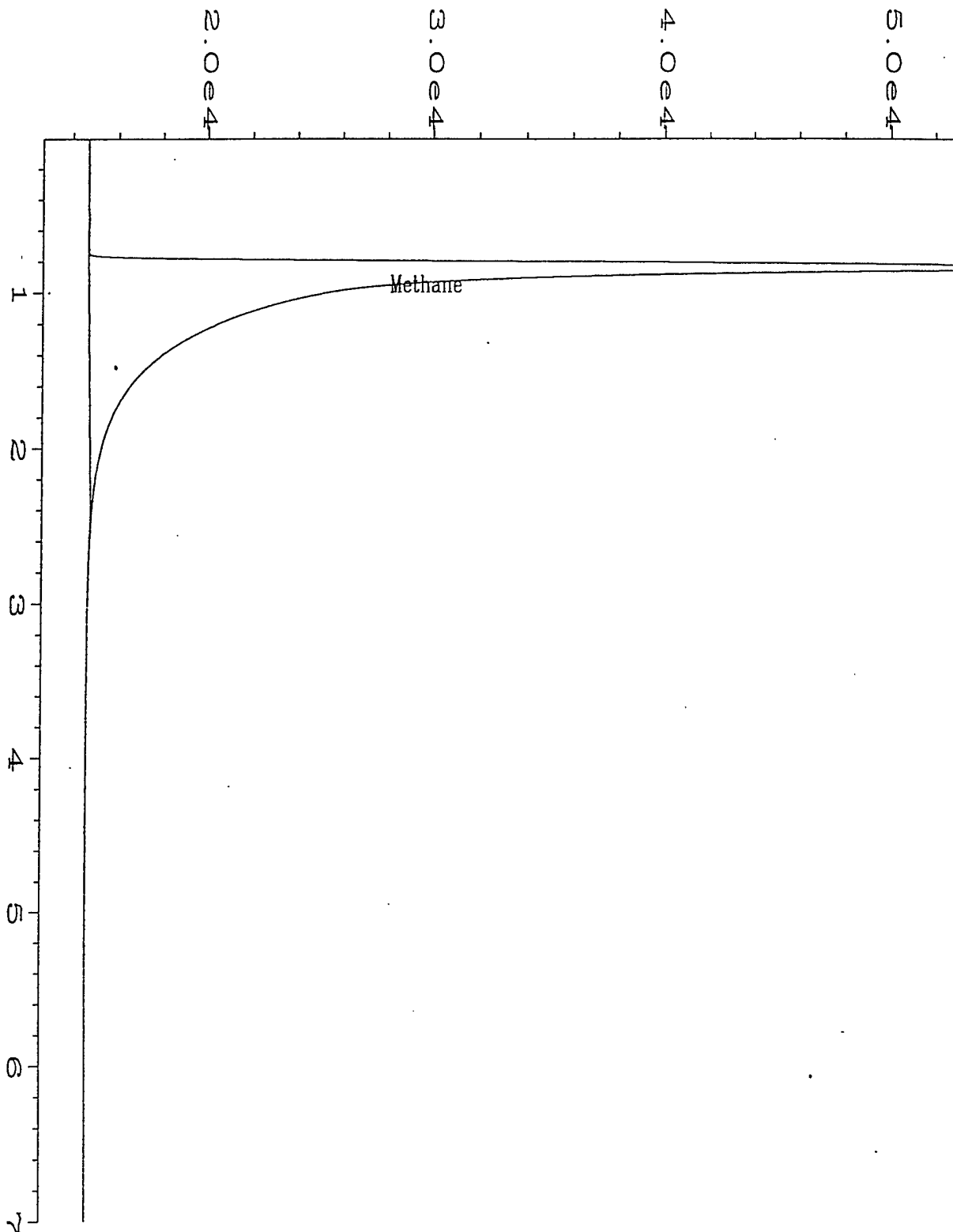
NA = Not analyzed/not applicable.



Analyst



Approved



Data File Name	: C:\HPCHEM\2\DATA\GAS0714\009R0101.D	Page Number	: 1
Operator	: Bill Michener	Vial Number	: 9
Instrument	: ALC/GAS	Injection Number	: 1
Sample Name	: LCS071495;Gas	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	GASES.MTH
Acquired on	: 14 Jul 95 09:04 AM	Analysis Method	: METH0714.MTH
Report Created on:	14 Jul 95 01:59 PM	Sample Amount	: 0
Last Recalib on	: 14 JUL 95 09:05 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Methane(500ppm) 50 ul from 1% Scotty		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.25 mg/L

<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Chloride (mg/L)</u>	<u>Dilution Factor</u>
X08735	MW-16	5.6	1X
X08736	MW-17	12.1	1X
X08737	MW-15	13.9	1X
X08738	MW-14	7.9	1X
X08739	MW-19	9.7	1X
X08740	MW-18	12.7	1X
X08741	MW-20	12.3	1X

Method Blank (7/11/95) <0.25

Quality Assurance

		<u>Spike</u> <u>Amount</u> <u>(mg/L)</u>	<u>Sample</u> <u>Result</u> <u>(mg/L)</u>	<u>Spike</u> <u>Result</u> <u>(mg/L)</u>	<u>%</u> <u>Recovery</u>
X08741	Matrix Spike MW-20	10.0	12.3	22.8	105
X08741	Matrix Spike Dup MW-20	10.0	12.3	23.4	111
	MS/MSD RPD				5.4

Debra J. Byrum
Analyst

M. Wild
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Anions

Date Sampled : 7/10/95	Client Project ID. : 722450.26
Date Received : 7/11/95	Lab Project No. : 95-2193
Date Prepared : 7/11/95	Method : EPA 300.0
Date Analyzed : 7/11/95	Matrix : Water
	Detection Limit : 0.076 mg/L

<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Nitrite-N(mg/L)</u>	<u>Dilution Factor</u>
X08735	MW-16	<0.076	1X
X08736	MW-17	<0.076	1X
X08737	MW-15	<0.076	1X
X08738	MW-14	<0.076	1X
X08739	MW-19	<0.076	1X
X08740	MW-18	<0.076	1X
X08741	MW-20	<0.076	1X
Method Blank (7/11/95)		<0.076	

Quality Assurance**

		<u>Spike</u> <u>Amount</u> <u>(mg/L)</u>	<u>Sample</u> <u>Result</u> <u>(mg/L)</u>	<u>Spike</u> <u>Result</u> <u>(mg/L)</u>	<u>%</u> <u>Recovery</u>
X08741	Matrix Spike MW-20	10.0	<0.25	10.0	100
X08741	Matrix Spike Dup MW-20	10.0	<0.25	9.5	95
MS/MSD RPD					4.9

** = Quality assurance results reported as Nitrite (NO₂).

Debra J. Byrum
Analyst

[Signature]
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

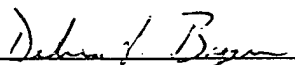
Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.056 mg/L

<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Nitrate-N(mg/L)</u>	<u>Dilution Factor</u>
X08735	MW-16	<0.056	1X
X08736	MW-17	0.36	1X
X08737	MW-15	0.10	1X
X08738	MW-14	<0.056	1X
X08739	MW-19	0.076	1X
X08740	MW-18	1.7	1X
X08741	MW-20	1.7	1X
Method Blank (7/11/95)		<0.056	

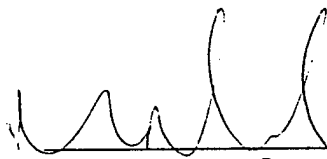
Quality Assurance**

		<u>Spike</u> <u>Amount</u> <u>(mg/L)</u>	<u>Sample</u> <u>Result</u> <u>(mg/L)</u>	<u>Spike</u> <u>Result</u> <u>(mg/L)</u>	<u>%</u> <u>Recovery</u>
X08741	Matrix Spike MW-20	10.0	7.6	17.4	98
X08741	Matrix Spike Dup MW-20	10.0	7.6	17.2	95
	MS/MSD RPD				2.3

** = Quality assurance results reported as Nitrate (NO₃).



Analyst



Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Anions

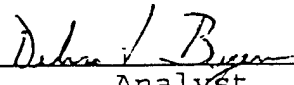
Date Sampled : 7/10/95	Client Project ID. : 722450.26
Date Received : 7/11/95	Lab Project No. : 95-2193
Date Prepared : 7/11/95	Method : EPA 300.0
Date Analyzed : 7/11/95	Matrix : Water
	Detection Limit : 0.25 mg/L

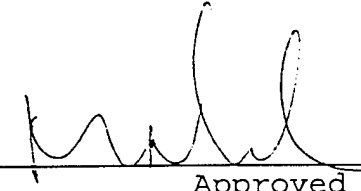
<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Sulfate (mg/L)</u>	<u>Dilution Factor</u>
X08735	MW-16	4.2	1X
X08736	MW-17	2.9	1X
X08737	MW-15	5.0	1X
X08738	MW-14	11.8	1X
X08739	MW-19	37.9	1X
X08740	MW-18	12.4	1X
X08741	MW-20	13.6	1X

Method Blank (7/11/95) <0.25

Quality Assurance

		<u>Spike</u> <u>Amount</u> <u>(mg/L)</u>	<u>Sample</u> <u>Result</u> <u>(mg/L)</u>	<u>Spike</u> <u>Result</u> <u>(mg/L)</u>	<u>%</u> <u>Recovery</u>
X08741	Matrix Spike MW-20	10.0	13.6	23.6	100
X08741	Matrix Spike Dup MW-20	10.0	13.6	23.8	102
	MS/MSD RPD				1.7


Analyst


Approved

FAXEvergreen Analytical Inc
4036 Youngfield St
Wheat Ridge, CO 80033Date 7/19/95
Number of pages including cover sheet 13

To:

Todd Wiedemeier

From:

Patty McClellanPhone 303-831-8100Fax Phone 303-831-8208

CC:

Phone 303-425-6021Fax Phone 303-425-6854

REMARKS:

☐ Urgent☒ For your review☐ Reply ASAP☐ Please comment

Todd,
This fax is being sent in two
portions of 13 pages each. Please call if
you do not receive 26 pages total.

Thanks,
Patty

Seymour Johnson data.

Evergreen Analytical Sample Log Sheet

Project # 95-2193Date(s) Sampled: 07/10/95 COCDate Due: 07/18/95-UST
07/25/95-ANIONSs Received: 07/11/95 0920Holding Time(s): 07/12-NO2,NO3
07/17-TEH;07/24-BTEX,TVH
Rush STANDARDClient Project I.D. 722450.26 Seymour JohnsonClient: PARSONS ENGINEERING SCIENCEAddress: 1700 BROADWAY, SUITE 900DENVER, CO 80290Contact: TODD WIEDEMEIER

Client P.O. _____

Phone #831-8100 Fax #831-8208Shipping Charges N/AE.A. Cooler # 475Airbill # FED EX 6475871920Custody Seal Intact? N/A

Cooler _____ Bottles _____

COC Present YSample Tags Present? YSample Tags Listed? YSample(s) Sealed? Y

Special Invoicing/Billing _____

Special Instructions ✓ 1 SAMPLE BROKEN IN TRANSIT. ★ ALL BTEX ARE TO INCLUDE
CHLOROBENZENE, TMB AND TMB.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X08735A-C	MW-16	★ BTEX	W	40V	2
X08736A-C	MW-17	★ BTEX	W	40V	2
X08737A-C	MW-15	★ BTEX	W	40V	2
X08738A-C	MW-14	★ BTEX	W	40V	2
X08739A-C	MW-19	★ BTEX	W	40V	2
X08740A-C	MW-18	★ BTEX	W	40V	2
X08741A-C	MW-20	★ BTEX	W	40V	2
X08742A-C	MW-21	★ BTEX	W	40V	2
X08743A-C	TRIP BLANK	★ BTEX	W	40V	2
X08735D-F	MW-16	TVH	W	40V	2
X08736D-F	MW-17	TVH	W	40V	2
X08737D-F	MW-15	TVH	W	40V	2
X08738D-F	MW-14	TVH	W	40V	2
X08739D-F	MW-19	TVH	W	40V	2
X08740D-F	MW-18	TVH	W	40V	2

R = Samples to be returned

Route GC/MS _____ GC 5 Metals _____ Wet Chem 1 SxPrep 1 Acctg 1SxRec C XXXXXXXXXX C Sales C File OrigCustodian/Date: Jo 7/11/95
Jim 7/11/95

Lab #	Client ID#	Analysis	Mtx	Btl	Loc
41D/E	MW-20	✓ TVH	W	40V	2
08735G-I	MW-16	METHANE	W	40V	2
08736G-I	MW-17	METHANE	W	40V	2
08737G-I	MW-15	METHANE	W	40V	2
08738G-I	MW-14	METHANE	W	40V	2
08739G-I	MW-19	METHANE	W	40V	2
08740G-I	MW-18	METHANE	W	40V	2
08741G-I	MW-20	METHANE	W	40V	2
08735J	MW-16	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
08736J	MW-17	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
08737J	MW-15	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
08738J	MW-14	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
08739J	MW-19	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
08740J	MW-18	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
08741J	MW-20	Cl ⁻ , NO ₂ , NO ₃ , SO ₄	W	125P	C3
08735K	MW-16	TEH	W	11A	C3
08736K	MW-17	TEH	W	11A	C3
08737K	MW-15	TEH	W	11A	C3
08738K	MW-14	TEH	W	11A	C3
08739K	MW-19	TEH	W	11A	C3
08740K	MW-18	TEH	W	11A	C3
08741K	MW-20	TEH	W	11A	C3

Project # 94-2193

Page 2 of 2 Pages

R=Sample to be returned

Evergreen Analytical Inc.

4600 Langfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6054
(800) 845-7400

COMPANY P.L.S. ESADDRESS 401 Morrison Oaks Blvd S. #210CITY Carly STATE NC ZIP 277573PHONE# (919) 677-0080 FAX (919) 677-0110

Sampler Name:

(signature) Thomas C. Richardson(print) Th. C. R.Evergreen Analytical Cooler No. 475

Cooler Received

Please PRINT

all information:

CLIENT
SAMPLE

IDENTIFICATION DATE SAMPLED TIME

MW-16	7/10/95	1030	11
MW-17	7/10/95	1145	11
MW-15	7/10/95	1245	11
MW-14	7/10/95	1350	11
MW-19	7/10/95	1530	11
MW-18	7/10/95	1615	11
MW-20	7/10/95	1715	11
MW-21	7/10/95	1745	3
TRIP BLANK	7/10/95		3

HT:

DD:

ANALYSIS REQUESTED

Water/Drinking/Discharge/Ground (circle)
Soil / Solid
Oil / Sludge
TCLP VOA/BNA/Pest/Herb/Metals (circle)
VOA 8260/624/524.2 (circle)
BNA 8270/625 (circle)
Pesticides 8080/608 (circle)
Pest/PCBs 8080/608/508 (circle)
Herbicides 8150/515 (circle)
PCB Screen
BTEX 9020/602 (circle)/MTBE (circle)
TPH 418, 1/Oil & Grease 413.1 (circle)
TPH 8015mod. (Gasoline)
TPH 8015mod. (Diesel)
Total Metals-DW / NPDES / SW846 (circle & list metals below)
Dissolved Metals - DW / SW846 (circle & list metals below)
Metals G-I
CI. NO. NC. 504
G-I

EAL use only
Do not write
in shaded areaEAL Project # 2193

EAL Sample No.

X 08735 A-A

730

737

738

739

740

741

742 A-C

743 A-C

Location C3 #2

Container Size

Instructions: FED X B.V. # 6475871920

Relinquished by: (Signature)

Th. C. R.

Date/Time

7/10/95

Received by: (Signature)

Thomas C. Richardson

Date/Time

7/11/95

Relinquished by: (Signature)

Th. C. R.

Date/Time

7/11/95

Received by: (Signature)

Th. C. R.

Date/Time

7/11/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-16	Client Project No.	: 722450.26
Lab Sample Number	: X08735	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071113
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		96%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-17	Client Project No.	: 722450.26
Lab Sample Number	: X08736	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071114
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	37	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		87%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

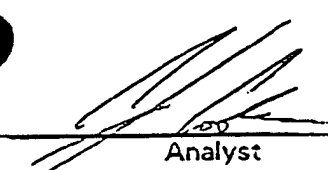

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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-15	Client Project No.	: 722450.26
Lab Sample Number	: X08737	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071115
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		86%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

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U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-14	Client Project No.	: 722450.26
Lab Sample Number	: X08738	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071116
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		87%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

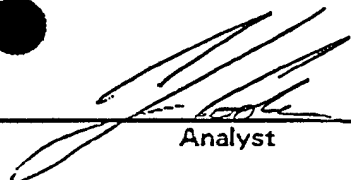
E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number : MW-19
Lab Sample Number : X08739
Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project No. : 722450.26
Lab Project No. : 95-2193
Dilution Factor : 1.00
Method : 602
Matrix : Water
Lab File No. : BX1071117
Method Blank No. : MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		94%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

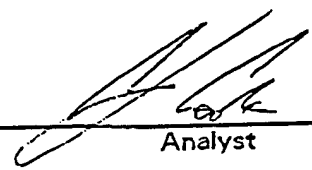
E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-18	Client Project No.	: 722450.26
Lab Sample Number	: X08740	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/11/95	Lab File No.	: BX1071118
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
3,5-Trimethylbenzene	108-67-8	1.0	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		83%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-20	Client Project No.	: 722450.26
Lab Sample Number	: X08741	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071120
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	1.1	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		80%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

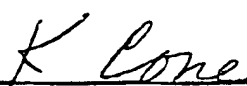
E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-21	Client Project No.	: 722450.26
Lab Sample Number	: X08742	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071121
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	0.8	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
3,5-Trimethylbenzene	108-67-8	1.1	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		84%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

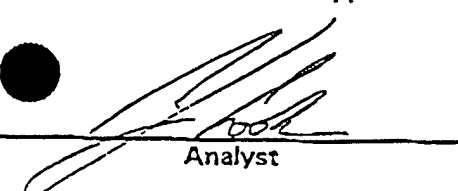
E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst
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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

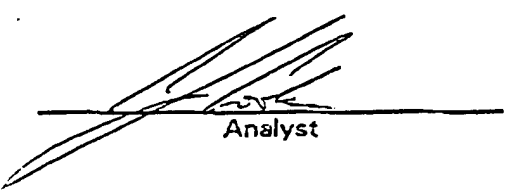
Client Sample Number	: Trip Blank	Client Project No.	: 722450.26
Lab Sample Number	: X08743	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: 602
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/12/95	Lab File No.	: BX1071123
		Method Blank No.	: MB1071195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.5
Surrogate Recovery (α,α,α -Trifluorotoluene):		72%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled : 7/10/95 Client Project Number : 722450.26
Date Received : 7/11/95 Lab Project Number : 95-2193
Date Prepared : 7/12/95 Matrix : Water
Method Number : EPA 5030/8015 Modified

Evergreen Sample #	Client Sample #	Analysis Date	Surrogate Recovery	Result mg/L	RL mg/L
MB071195	METHOD BLANK	7/12/95	100%	U	0.1
X08741	MW-20	7/12/95	102%	U	0.1
X08735	MW-16	7/12/95	103%	U	0.1
X08736	MW-17	7/12/95	102%	0.1	0.1
X08737	MW-15	7/12/95	102%	U	0.1
X08738	MW-14	7/12/95	101%	U	0.1
X08739	MW-19	7/12/95	101%	U	0.1
X08740	MW-18	7/12/95	99%	U	0.1

QUALIFIERS

U = TVH analyzed for but not detected.

B = TVH found in blank also.

E = Extrapolated value. Exceeds calibration range.

RL = Reporting Limit.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH as Jet Fuel)

Date Sampled	: 7/10/95	Client Project Number	: 722450.26
Date Received	: 7/11/95	Lab Project Number	: 95-2193
Date Prepared	: 7/11/95	Matrix	: Water
Date Analyzed	: 7/13,14/95	Method Number	: 3500/Mod.8015

Evergreen Sample #	Client Sample #	Surrogate Recovery	TEH Jet Fuel mg/L	RL mg/L
WB071195	WATER METHOD BLANK	91%	U	0.5
X08735	MW-16	102%	U	0.5
X08736	MW-17	97%	U	0.5
X08737	MW-15	81%	U	0.5
X08738	MW-14	83%	U	0.5
X08739	MW-19	97%	U	0.5
X08740	MW-18	89%	U	0.5
X08741	MW-20	93%	U	0.5

QUALIFIERS

U = TEH as Jet Fuel analyzed for but not detected.

B = TEH as Jet Fuel found in blank also.

E = Extrapolated value.

RL = Reporting Limit


Analyst
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-16	Client Project No.	: 722450.26
Lab Sample Number	: X08735	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714010


Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.142	0.004


Temperature	: 73 F	Saturation Meth	0.034148524
Amount Injected	: 0.5 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	0.107392382
Head space created	: 4 ml	in Head Space	
Methane Area	: 794.107 ug		

Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved

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4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-17	Client Project No.	: 722450.26
Lab Sample Number	: X08736	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714011

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.006	0.004

Temperature	: 73.1 F	Saturation Meth	: 0.0015
Amount Injected	: 0.5 ml	Concentration Meth	: 0.00473104
Total Volume of Sample	: 43 ml	Concentration in Head Space	
Head space created	: 4 ml		
Methane Area	: 34.99 ug		

Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.

[Signature]
Analyst

[Signature]
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-15	Client Project No.	: 722450.26
Lab Sample Number	: X08737	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714013

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 71.9 F	Saturation	Meth	0
Amount Injected	: 0.5 ml	Concentration		
Total Volume of Sample	: 43 ml	Concentration	Meth	0
Head space created	: 4 ml	in Head Space		
Methane Area	: 0 ug			

Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

Bill M. Schaner
Analyst

K. Cone
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number : MW-14
Lab Sample Number : X08738
Date Sampled : 7/10/95
Date Received : 7/11/95
Date Extracted/Prepared : 7/14/95
Date Analyzed : 7/14/95

Client Project No. : 722450.26
Lab Project No. : 95-2193
Dilution Factor : 1.00
Method : RSKSOP-175
Matrix : Water
Lab File No. : GAS0714014

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature : 72.2 F
Amount Injected : 0.5 ml
Total Volume of Sample : 43 ml
Head space created : 4 ml
Methane Area : 0 ug

Saturation Meth
Concentration
Concentration Meth
in Head Space

Atomic weight(Methane) : 16 g

QUALIFIERS:


E = Extrapolated value.

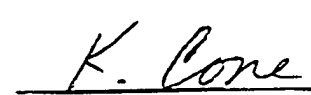
U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-19	Client Project No.	: 722450.26
Lab Sample Number	: X08739	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714015

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	0.046	0.004

Temperature	: 72.7 F	Saturation Meth	: 0.011132209
Amount Injected	: 0.5 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	: 0.035028995
Head space created	: 4 ml	in Head Space	
Methane Area	: 258.874 ug		

Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. M. McChesney
Analyst

K. Cone
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-18	Client Project No.	: 722450.26
Lab Sample Number	: X08740	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714016

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	:	73 F
Amount Injected	:	0.5 ml
Total Volume of Sample	:	43 ml
Head space created	:	4 ml
Methane Area	:	0 ug

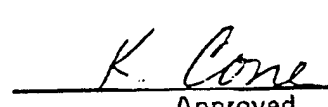
Saturation	Meth	
Concentration		
Concentration	Meth	
in Head Space		

Atomic weight(Methane)	:	16 g
------------------------	---	------

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Methane Report Form

Client Sample Number	: MW-20	Client Project No.	: 722450.26
Lab Sample Number	: X08741	Lab Project No.	: 95-2193
Date Sampled	: 7/10/95	Dilution Factor	: 1.00
Date Received	: 7/11/95	Method	: RSKSOP-175
Date Extracted/Prepared	: 7/14/95	Matrix	: Water
Date Analyzed	: 7/14/95	Lab File No.	: GAS0714017

Compound Name	Cas Number	Sample Concentration mg/L	RL mg/L
Methane	74-82-8	U	0.004

Temperature	: 72.9 F	Saturation Meth	0
Amount Injected	: 0.5 ml	Concentration	
Total Volume of Sample	: 43 ml	Concentration Meth	0
Head space created	: 4 ml	in Head Space	
Methane Area	: 0 ug		

Atomic weight(Methane) : 16 g

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.

Ben M. Michener
Analyst

K. Cone
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Anions

Date Sampled : 7/10/95	Client Project ID. : 722450.26
Date Received : 7/11/95	Lab Project No. : 95-2193
Date Prepared : 7/11/95	Method : EPA 300.0
Date Analyzed : 7/11/95	Matrix : Water
	Detection Limit : 0.25 mg/L

<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Chloride (mg/L)</u>	<u>Dilution Factor</u>
X08735	MW-16	5.6	1X
X08736	MW-17	12.1	1X
X08737	MW-15	13.9	1X
X08738	MW-14	7.9	1X
X08739	MW-19	9.7	1X
X08740	MW-18	12.7	1X
X08741	MW-20	12.3	1X

Method Blank (7/11/95) <0.25

Quality Assurance

		<u>Spike</u> <u>Amount</u> <u>(mg/L)</u>	<u>Sample</u> <u>Result</u> <u>(mg/L)</u>	<u>Spike</u> <u>Result</u> <u>(mg/L)</u>	<u>%</u> <u>Recovery</u>
X08741	Matrix Spike MW-20	10.0	12.3	22.8	105
X08741	Matrix Spike Dup MW-20	10.0	12.3	23.4	111
	MS/MSD RPD				5.4

Debra J. Buerger
Analyst

M. Wild
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Anions

Date Sampled : 7/10/95	Client Project ID. : 722450.26
Date Received : 7/11/95	Lab Project No. : 95-2193
Date Prepared : 7/11/95	Method : EPA 300.0
Date Analyzed : 7/11/95	Matrix : Water
	Detection Limit : 0.076 mg/L

<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Nitrite-N(mg/L)</u>	<u>Dilution Factor</u>
X08735	MW-16	<0.076	1X
X08736	MW-17	<0.076	1X
X08737	MW-15	<0.076	1X
X08738	MW-14	<0.076	1X
X08739	MW-19	<0.076	1X
X08740	MW-18	<0.076	1X
X08741	MW-20	<0.076	1X

Method Blank (7/11/95) <0.076

Quality Assurance**

		<u>Spike</u> <u>Amount</u> <u>(mg/L)</u>	<u>Sample</u> <u>Result</u> <u>(mg/L)</u>	<u>Spike</u> <u>Result</u> <u>(mg/L)</u>	<u>%</u> <u>Recovery</u>
X08741	Matrix Spike MW-20	10.0	<0.25	10.0	100
X08741	Matrix Spike Dup MW-20	10.0	<0.25	9.5	95
	MS/MSD RPD				4.9

** = Quality assurance results reported as Nitrite (NO₂).

Debra J. Byrum
Analyst

[Signature]
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.056 mg/L

Evergreen Sample #	Client Sample ID	Nitrate-N(mg/L)	Dilution Factor
X08735	MW-16	<0.056	1X
X08736	MW-17	0.36	1X
X08737	MW-15	0.10	1X
X08738	MW-14	<0.056	1X
X08739	MW-19	0.076	1X
X08740	MW-18	1.7	1X
X08741	MW-20	1.7	1X

Method Blank (7/11/95)

<0.056

Quality Assurance**

		Spike Amount (mg/L)	Sample Result (mg/L)	Spike Result (mg/L)	% Recovery
X08741	Matrix Spike MW-20	10.0	7.6	17.4	98
X08741	Matrix Spike Dup MW-20	10.0	7.6	17.2	95
	MS/MSD RPD				2.3

** = Quality assurance results reported as Nitrate (NO₃).

Debra L. Byers
Analyst

[Signature]
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Anions

Date Sampled : 7/10/95
Date Received : 7/11/95
Date Prepared : 7/11/95
Date Analyzed : 7/11/95

Client Project ID. : 722450.26
Lab Project No. : 95-2193
Method : EPA 300.0
Matrix : Water
Detection Limit : 0.25 mg/L

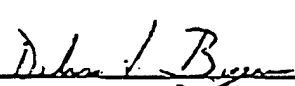
<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Sulfate (mg/L)</u>	<u>Dilution Factor</u>
X08735	MW-16	4.2	1X
X08736	MW-17	2.9	1X
X08737	MW-15	5.0	1X
X08738	MW-14	11.8	1X
X08739	MW-19	37.9	1X
X08740	MW-18	12.4	1X
X08741	MW-20	13.6	1X


Method Blank (7/11/95)

<0.25

Quality Assurance

		<u>Spike</u> <u>Amount</u> <u>(mg/L)</u>	<u>Sample</u> <u>Result</u> <u>(mg/L)</u>	<u>Spike</u> <u>Result</u> <u>(mg/L)</u>	<u>%</u> <u>Recovery</u>
X08741	Matrix Spike MW-20	10.0	13.6	23.6	100
X08741	Matrix Spike Dup MW-20	10.0	13.6	23.8	102
	MS/MSD RPD				1.7


Analyst


Approved

2193cm.25



Evergreen

May 16, 1995

MR TODD WIEDEMEIER
PARSONS ENGINEERING SCIENCE INC
1700 BROADWAY SUITE 900
DENVER CO 80290

Data Reports : 95-1182, 1217, 1240, 1264
Client Project : 722450.SCO2
Seymour Johnson AFB

Dear Mr. Wiedemeier:

Enclosed are the analytical results for the samples shown in the Sample Log Sheet. The enclosed data have been reviewed for quality assurance. If you have any questions concerning the reported information, please contact Patty McClellan, Program Manager, or me.

Please Note: Samples marked for return on the Sample Log Sheet are considered hazardous, unsuitable for municipal disposal or were placed on hold at your request. Samples considered hazardous or unsuitable for municipal disposal will be returned to you immediately. Samples placed on hold will be returned and samples not considered hazardous will be disposed of one (1) month from the date of this letter.

The invoice for this work will be mailed to your Accounts Payable department shortly.

Thank you for using the services of Evergreen Analytical.

Sincerely,

J. A. Barney by *pm*
Jack Barney
President

TM



CASE NARRATIVE

Evergreen Analytical Laboratory (EAL) Projects:
95-1182, 95-1217, 95-1240 and 95-1264

Parsons Engineering Science, Inc. (PES) Project:
Seymour Johnson AFB (722450.2602)

Sample Receipt

Between April 12 and 19, 1995, soil and groundwater samples were received at EAL for analysis under Subcontract 722450.SC02. Soil samples were received in coring tubes, and were non-homogeneous in nature. The problems associated with receiving samples in coring tubes was discussed with Todd Wiedemeier of PES on April 13, and it was agreed that samples would not be sent in tubes in future sampling events. Refer to the EAL Check-in Record for specific information regarding the condition of samples upon receipt. Refer to the EAL Sample Log Sheet for specific log-in information and cross-reference of EAL and PES sample identifications.

Data Package

All data are reported in one comprehensive package that is segregated based upon EAL project number. Each EAL project represents a group of samples received on a given day. The EAL Sample Log Sheet summarizes the samples represented in each EAL project.

A separate invoice for each EAL project number will be generated.

Quality assurance data may overlap from one EAL project to another. All required matrix spike/matrix spike duplicate (MS/MSD) and laboratory duplicate samples were analyzed. Laboratory Control Samples (LCS) and Method Blanks were analyzed when required and also are included in the data package.

BTEX, Trimethylbenzenes, Tetramethylbenzene, Chlorobenzene, Method SW8020

All samples were analyzed for BTEX within holding time.

Samples MW-2 9.5-10.5, MW-2 10.5-12, MW-4 12-13.5, SS-1 11.5-13.5, SS-1 11.5-13.5 Dupe, SS-3 9-11, SS-3 9-11 Dupe, MW-7, MW-11, CPT-16, CPT-17, CPT-18 MW-3, MW-4, MW-4 Dupe, MW-5, MW-5 Dupe, MW-8, MW-12D and MW-13 were analyzed at dilutions ranging from DF=5 to DF=125,000 due to concentrations of target compounds beyond the linear range of the instrument. All associated reporting limits have been raised accordingly.

Page Two
Case Narrative
Parsons Engineering Science

Target analytes were detected in Method Blanks MB042395, MB042495, MB042595 and Methanol Extraction Blanks MEB042395 and MEB2050295 at concentrations less than 1 ppb. The associated samples have been "B" flagged.

Sample MW-10 11-12 MS/MSD recoveries were within the EAL acceptance criteria.

The Relative Percent Difference (RPD) for all laboratory duplicate samples was within the PES acceptance criteria. RPDs for SS-1 11.5-13.5, SS-3 9-11 and their associated duplicates were poor due to non-homogeneous coring samples noted at sample receipt.

All Laboratory Control Samples (LCS) and surrogate recoveries were within the EAL quality control acceptance criteria.

A 1 ppb standard has been analyzed with each SW8020 analytical sequence. The standard is generally part of the initial calibration curve. The initial calibration procedure is currently being switched from one based on a correlation coefficient, to one based on instrument response factors. The data included in this data package may have been analyzed by either procedure. It is anticipated that future samples for SW8020 will all be calibrated using the response factor procedure. The SW8020 SOP is being revised, and will be forwarded upon completion.

GC/MS, Method 624

Samples were analyzed by GC/MS Method 624 with the addition of MTBE, EDB, isopropyl ether, chlorobenzene, 1,2-dichlorobenzene (1,2-DCB), 1,3-DCB, 1,4-DCB, dichlorodifluoromethane, and trichlorofluoromethane. All samples were analyzed within holding time with the exception of MW-11 which required a dilution due to the high concentration of target compounds. The original analysis was performed within holding time, however, the results of the diluted samples, analyzed one day outside of holding time are reported.

Contamination was detected in Method Blanks RB050195 and RB050295 at concentrations at or around the reporting limit. The associated samples have been "B" flagged. The data are considered acceptable.

Samples MW-11, CPT-18 and MW-4 were analyzed at dilutions due to levels of contaminations beyond linear range. The reporting limits have been adjusted accordingly.

MS/MSD samples were analyzed with MW-11 with acceptable recoveries.

All Laboratory Fortified Blanks, (LFB) were analyzed with acceptable recoveries.

As this analysis is not requested in the Scope of Work, only the BTEX and added compounds are reported in the electronic deliverables.

BNA (Full Suite), Method 625

Method 625 analysis was performed on one sample, however, is reported on hard copy only as it was not included in the Scope of Work. Laboratory duplicate and MS/MSD samples required by the Subcontract were not analyzed due to insufficient sample volume.

Bis(2-ethylhexyl)phthalate, 2-methylnaphthalene, and Di-n-butylphthalate were detected in the Method Blank at 1 ppb. The associated sample data are "B" flagged as necessary. The data are considered acceptable.

There are no other quality control anomalies to report.

Total Volatile Hydrocarbons (TVH), Method 8015M

All samples submitted for TVH were analyzed within holding times.

Samples MW2 9.5-10.5, MW2 10.5-12, MW4 12-13.5, SS-1 11.5-13.5, SS-3 9-11, MW-7, MW-11, CPT-15 and MW-4 were analyzed at dilutions due to contamination in the samples. The reporting limits have been adjusted accordingly.

The relative percent difference for both sets of duplicates and MS/MSD samples were poor, due to the non-homogenous samples noted at the time of sample receipt.

Total Extractable Hydrocarbons (TEH), Method 8015M

All samples submitted for TEH analysis were analyzed within holding times.

Samples MW2 9.5-10.5, MW2 10.5-12, MW4 12-13.5, SS-1 11.5-13.5 and SS-3 9-11 were analyzed at dilutions due to contamination in the samples. Reporting limits have been raised accordingly.

The surrogate recovery for CPT-17, MW-8 and MW-3 was low and re-run with similar results. The samples were not reprepared due to insufficient sample volume.

Total Organic Carbon

Total Organic Carbon (TOC) in soil was analyzed by Huffman Laboratories of Golden, Colorado. TOC was determined by analyzing for total carbon (TC) and inorganic (carbonate) carbon (CC), then calculating the difference as TOC. Percent moisture results were applied to determine the adjusted result. The report from Huffman is included.

Page Four
Case Narrative
Parsons Engineering Science

Methane, Method RSKSOP-175

There are no quality control anomalies to report.

Metals (Pb), Method 6010

There are no quality control anomalies to report.

General Chemistry

There are no quality control anomalies to report for Alkalinity or Anion analyses.

Disk Deliverables

The disk deliverables are included with the hard copy package. Matrix spike, matrix spike duplicate and laboratory duplicate samples are not included on the disk. Please note that blank spaces in the laboratory detection limit and/or PQL column indicate that there is no detection limit or PQL for that analyte.

Reporting limits have been adjusted to reflect the percent moisture in all soil samples or increases due to dilutions.

A hard copy of each spreadsheet included on the diskette is included. The name for each spreadsheet is located in the top left corner on the first page of each spreadsheet printout.



Patricia A. McClellan, Project Manager



EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Methanol Blank Report

Method Blank Number : MEB042295
Date Extracted/Prepared : 4/22/95
Date Analyzed : 4/22/95
% Moisture : NA

Client Project No. : 722450.2602/SJ AFE
Lab Project No. : 95-1182
Dilution Factor : 125.00
Method : 602/8020
Matrix : Water/MeOH
Lab File No. : BX2042215

Compound Name	Cas Number	Sample Concentration ug/kg	RL ug/kg
Benzene	71-43-2	U	500
Toluene	108-88-3	U	500
Chlorobenzene	108-90-7	U	500
Ethyl Benzene	100-41-4	U	500
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	500
.3,5-Trimethylbenzene	108-67-8	U	500
1,2,4-Trimethylbenzene	95-63-6	U	500
1,2,3-Trimethylbenzene	526-73-8	U	500
1,2,3,4-Tetramethylbenzene	488-23-3	U	500

Surrogate Recovery (α,α,α -Trifluorotoluene): 104% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

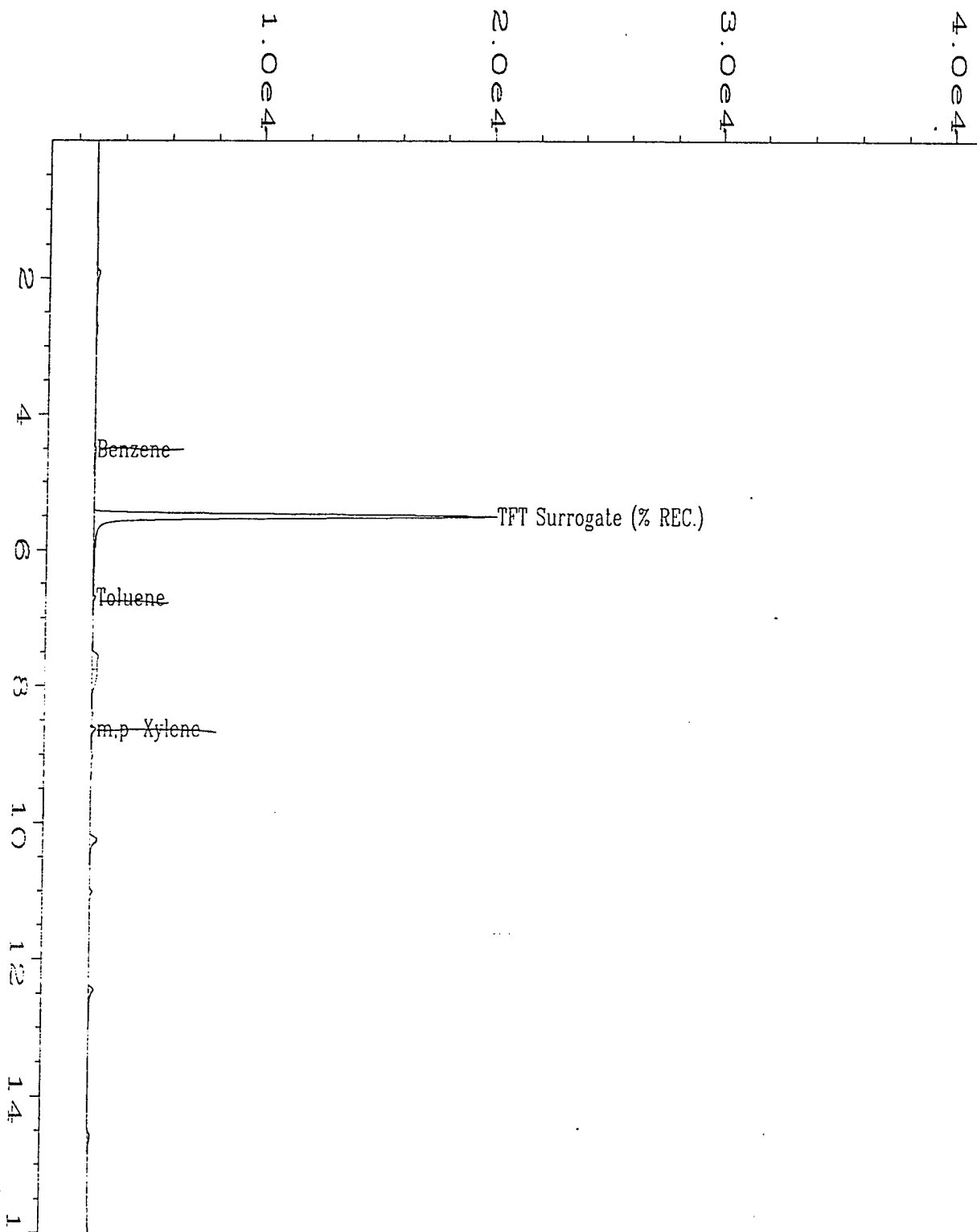
NA = Not Available/Not Applicable.

K. Cone

Analyst

P. McClellan

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20422\015R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MEB042295;125	Sequence Line	: 10
Run Time Bar Code:		Instrument Method:	BX20422.MTH
Acquired on	: 22 Apr 95 06:54 PM	Analysis Method	: BX20422.MTH
Report Created on:	24 Apr 95 06:42 PM	Sample Amount	: 0
Last Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 125		
Sample Info	: 100 UL MEOH		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Methanol Blank Report

Method Blank Number : MEB042395
Date Extracted/Prepared : 4/23/95
Date Analyzed : 4/23/95
% Moisture : NA

Client Project No. : 722450.2602/SJ AFB
Lab Project No. : 95-1182
Dilution Factor : 125.00
Method : 602/8020
Matrix : Water/MeOH
Lab File No. : BX2042311

Compound Name	Cas Number	Sample Concentration ug/kg	RL ug/kg
Benzene	71-43-2	U	500
Toluene	108-88-3	U	500
Chlorobenzene	108-90-7	U	500
Ethyl Benzene	100-41-4	U	500
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	51	500
3,5-Trimethylbenzene	108-67-8	54	500
1,2,4-Trimethylbenzene	95-63-6	U	500
1,2,3-Trimethylbenzene	526-73-8	110	500
1,2,3,4-Tetramethylbenzene	488-23-3	U	500
Surrogate Recovery (α,α,α -Trifluorotoluene):		105%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

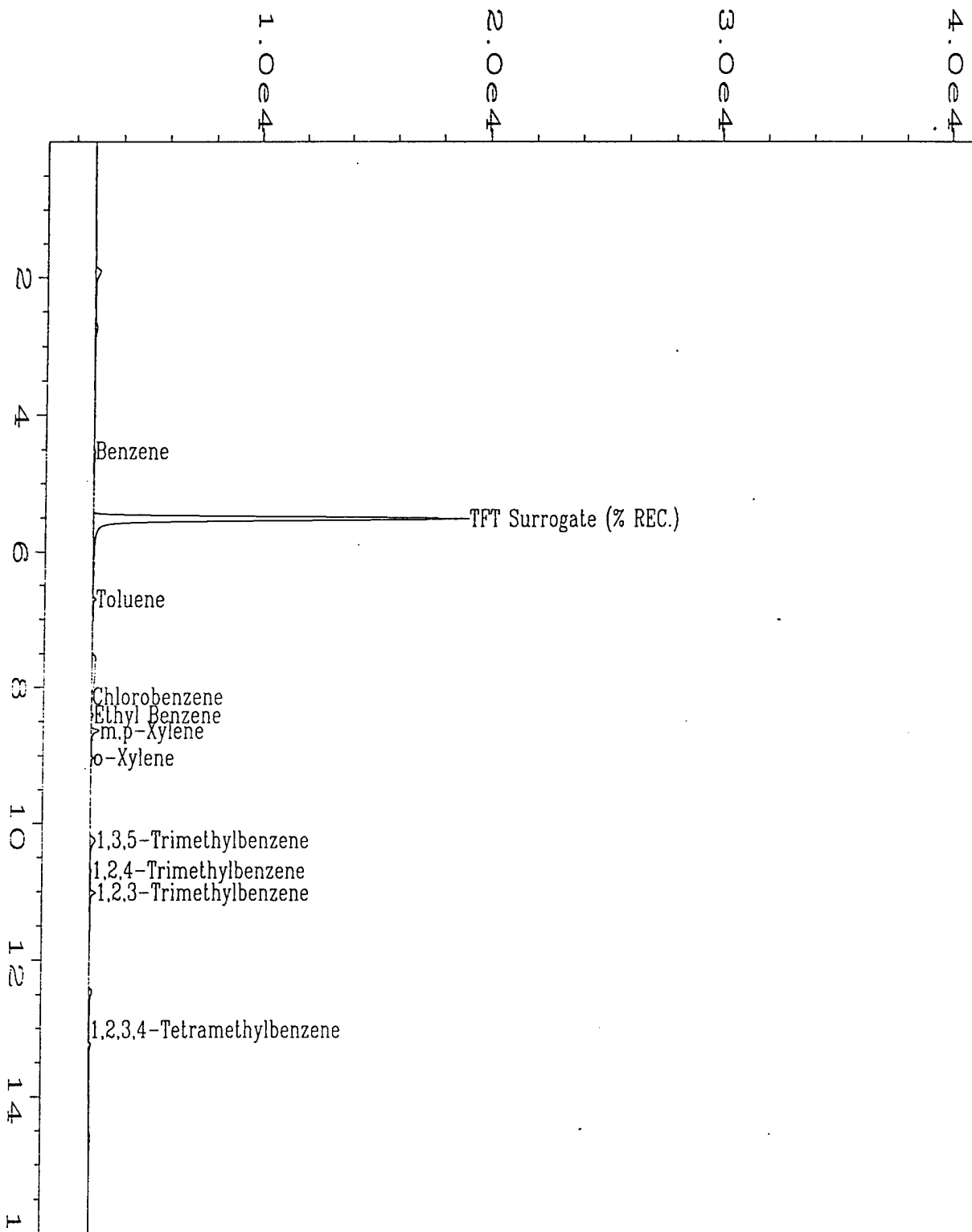
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

Analyst

K. Cone
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20423\011R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MEB042395	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20423.MTH
Acquired on	: 23 Apr 95 02:50 PM	Analysis Method	: BX20423.MTH
Report Created on:	02 May 95 02:26 PM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 04:27 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
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(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number : MB042095
Date Extracted/Prepared : 4/20/95
Date Analyzed : 4/20/95
% Moisture : NA

Client Project No. : 722450.2602/SJ AFB
Lab Project No. : 95-1182
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX1042009

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 101% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.


U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

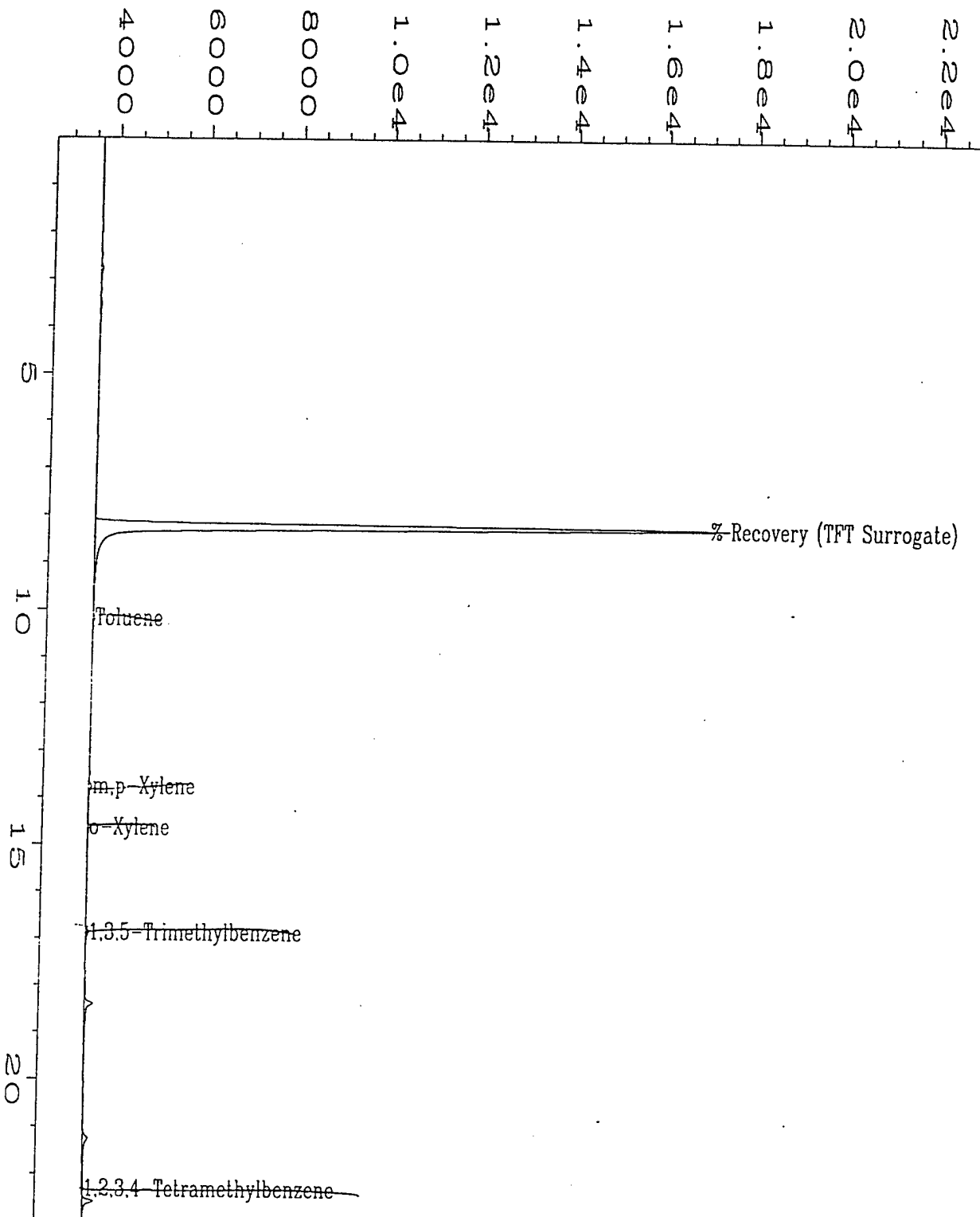
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

'A' = Not Available/Not Applicable.


Analyst


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ata File Name	: C:\HPCHEM\1\DATA\BX10420\009F0701.D	Page Number	: 1
operator	: SW Tyson	Vial Number	: 9
nstrument	: BTEX1	Injection Number	: 1
ample Name	: MB042095	Sequence Line	: 7
in Time Bar Code:		Instrument Method:	BX10420.MTH
quired on	: 20 Apr 95 02:35 PM	Analysis Method	: BX10420B.MTH
Created on:	21 Apr 95 12:38 PM	Sample Amount	: 0
ecalib on	: 21 APR 95 12:15 PM	ISTD Amount	:
ultiplier	: 1		

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number : MB042395
Date Extracted/Prepared : 4/23/95
Date Analyzed : 4/23/95
% Moisture : NA

Client Project No. : 722450.2602/SJ AFE
Lab Project No. : 95-1182
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2042310

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.4	0.4
,3,5-Trimethylbenzene	108-67-8	0.5	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	0.8	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 96% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.


U = Compound analyzed for, but not detected.


B = Compound also found in the blank.

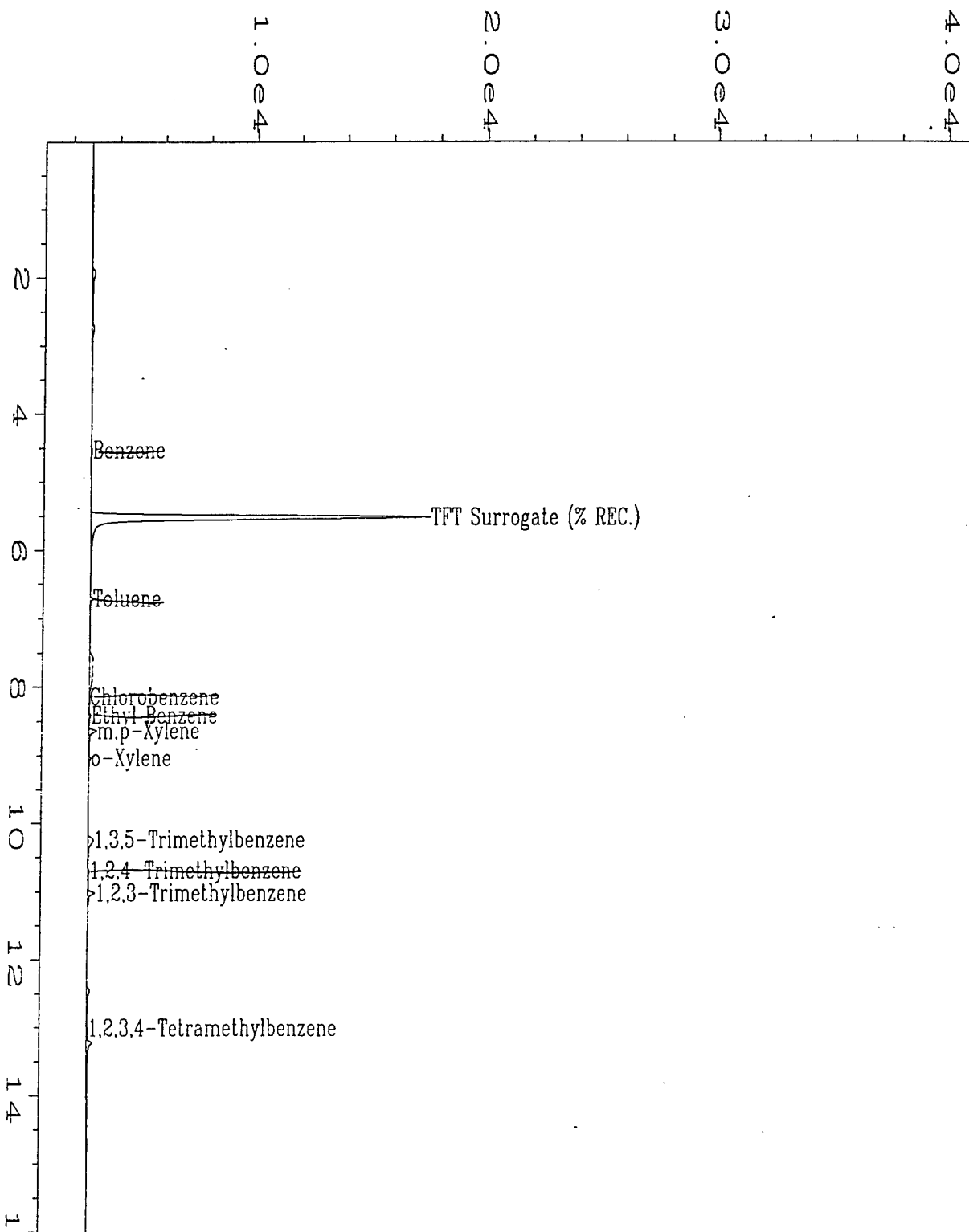
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

A = Not Available/Not Applicable.


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Data File Name	: C:\HPCHEM\2\DATA\BX20423\010R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB042395	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20423.MTH
Acquired on	: 23 Apr 95 02:14 PM	Analysis Method	: BX20423.MTH
Report Created on	: 02 May 95 02:25 PM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 04:27 PM	ISTD Amount	:
Multiplier	: 1		

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number : MB042295
Date Extracted/Prepared : 4/22/95
Date Analyzed : 4/22/95
% Moisture : NA

Client Project No. : 722450.2602/SJ AFE
Lab Project No. : 95-1182
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2042211

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	0.4	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 101% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.


B = Compound also found in the blank.

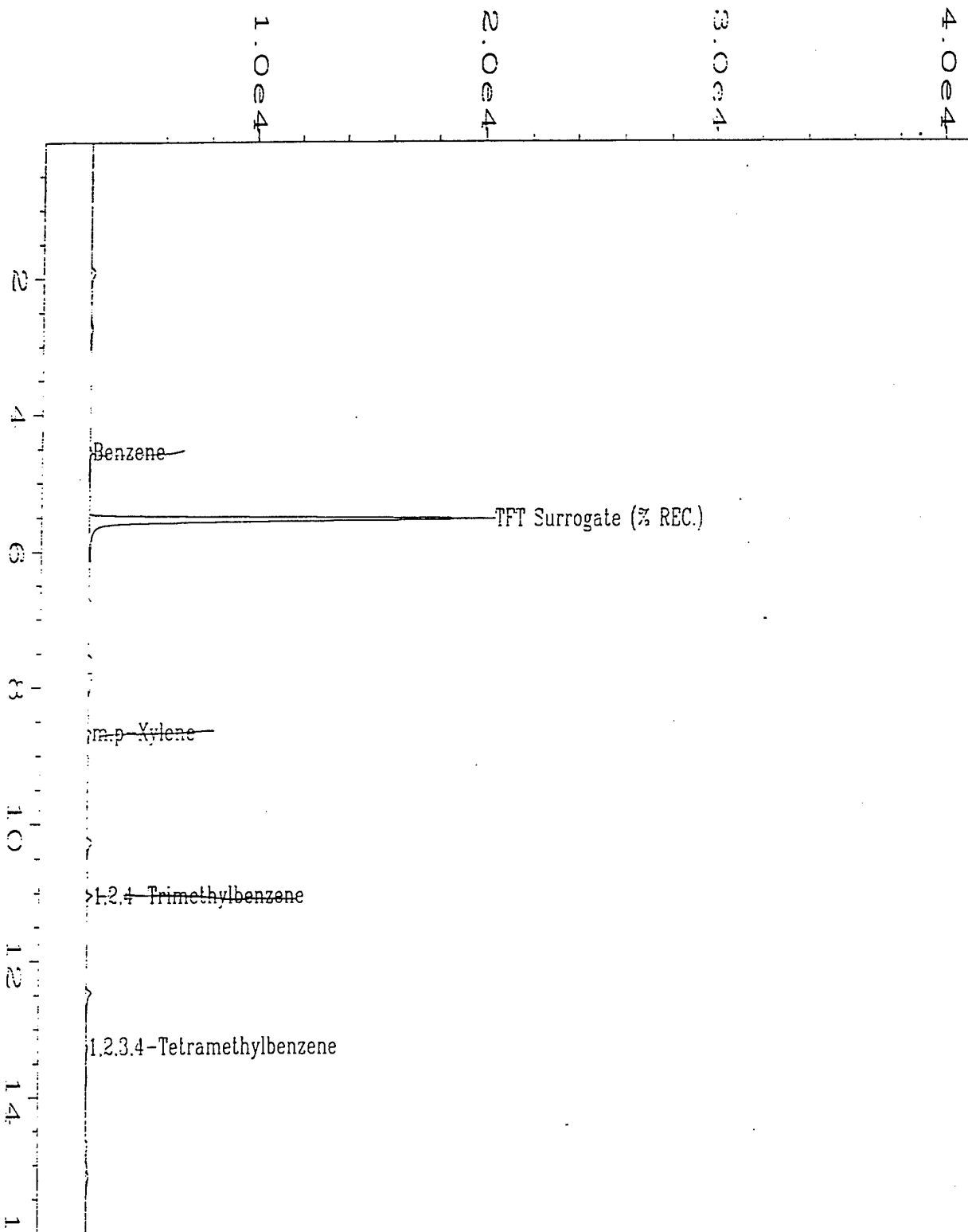
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\BX20422\011R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB042295	Sequence Line	: 10
Run Time Bar Code:		Instrument Method:	BX20422.MTH
Printed on	: 22 Apr 95 03:54 PM	Analysis Method	: BX20422.MTH
Port Created on:	24 Apr 95 06:40 PM	Sample Amount	: 0
Last Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 1		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number : MW-1 12-14
Lab Sample Number : X05620
Date Sampled : 4/10/95
Date Received : 4/12/95
Date Extracted/Prepared : 4/20/95
Date Analyzed : 4/20/95
% Moisture : 20.44%

Client Project No. : 722450.2602/SJ AFE
Lab Project No. : 95-1182
Dilution Factor : 1.00
Method : 8020
Matrix : Soil
Lab File No. : BX1042022
Method Blank No. : MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	5.0
Toluene	108-88-3	1.0 J	5.0
Chlorobenzene	108-90-7	U	5.0
Ethyl Benzene	100-41-4	U	5.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.8 J	5.0
,3,5-Trimethylbenzene	108-67-8	U	5.0
1,2,4-Trimethylbenzene	95-63-6	U	5.0
1,2,3-Trimethylbenzene	526-73-8	U	5.0
1,2,3,4-Tetramethylbenzene	488-23-3	U	5.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		92%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

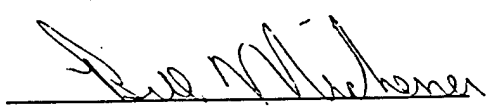
U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

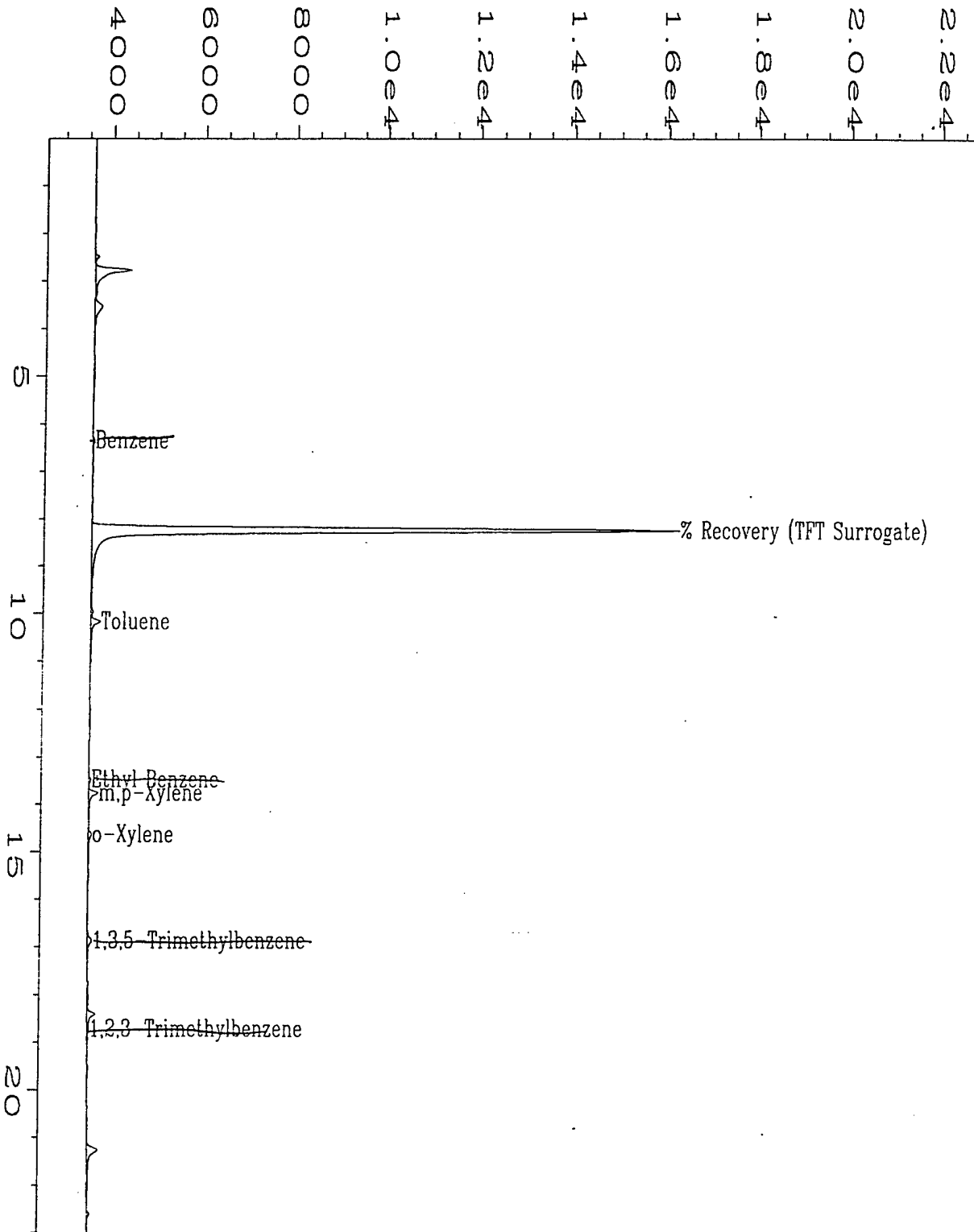
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

'A = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\1\DATA\BX10420\022F0701.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 22
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05620;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: BX10420.MTH
Acquired on	: 20 Apr 95 11:18 PM	Analysis Method	: BX10420B.MTH
Report Created on:	21 Apr 95 12:44 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 12:15 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT#: 95-1182 CLIENT#: MW-1 12-14 SOIL		

Inc 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-2 9.5-10.5	Client Project No.	: 722450.2602/SJ AFB
Lab Sample Number	: X05621	Lab Project No.	: 95-1182
Date Sampled	: 4/11/95	Dilution Factor	: 5000.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/22/95	Lab File No.	: BX2042218
% Moisture	: 19.92%	Method Blank No.	: MEB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	25000
Toluene	108-88-3	3800 J	25000
Chlorobenzene	108-90-7	9300 J	25000
Ethyl Benzene	100-41-4	4300 J	25000
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	12000 J	25000
3,5-Trimethylbenzene	108-67-8	35000	25000
1,2,4-Trimethylbenzene	95-63-6	90000	25000
1,2,3-Trimethylbenzene	526-73-8	33000	25000
1,2,3,4-Tetramethylbenzene	488-23-3	42000	25000
Surrogate Recovery (α,α,α -Trifluorotoluene):		101%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

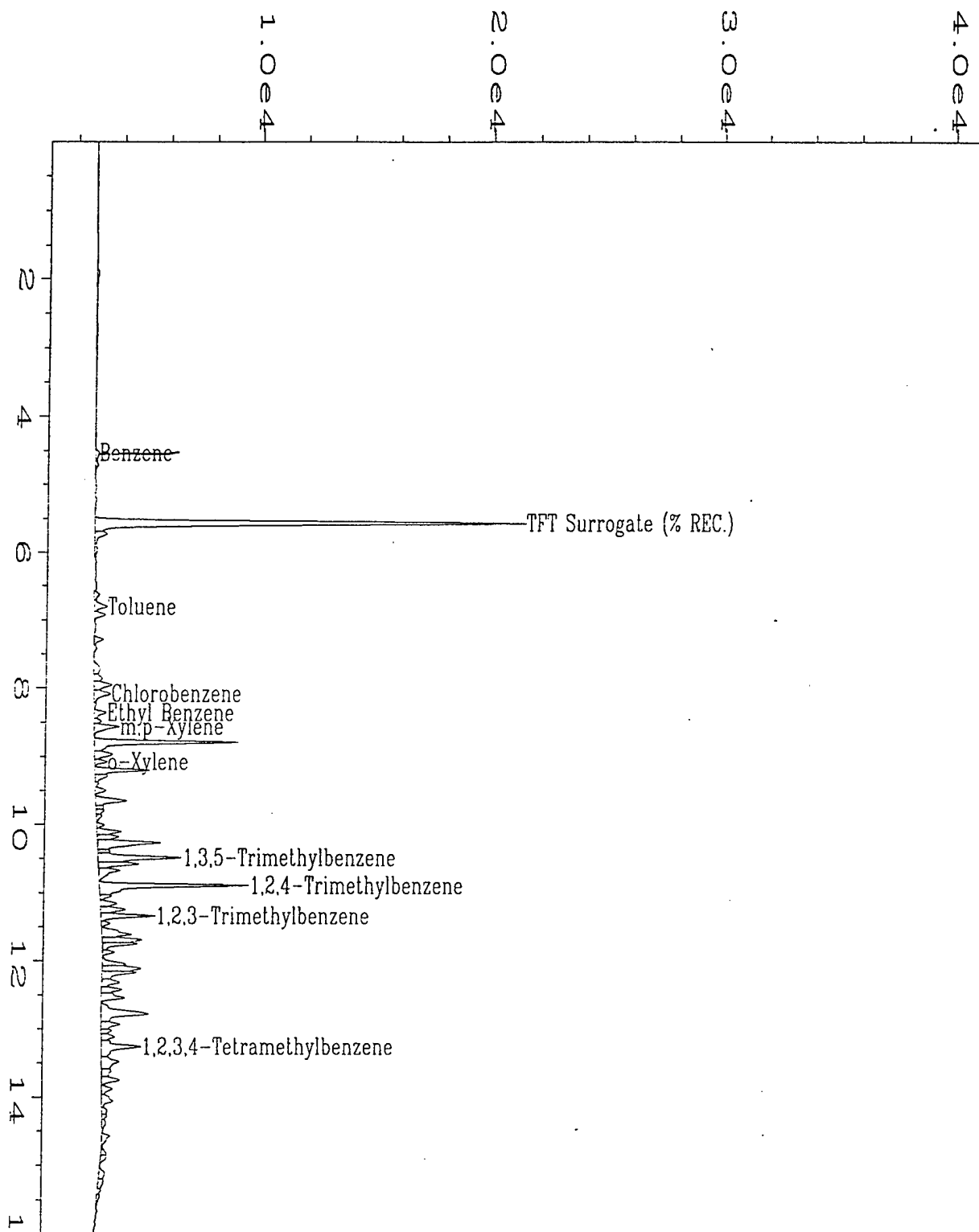
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

N/A = Not Available/Not Applicable.


Analyst


Approved



Data File Name : C:\HPCHEM\2\DATA\BX20422\018R1001.D
 Operator : T.Lockwood Page Number : 1
 Instrument : BTEX2 Vial Number : 18
 Sample Name : X05621;5000;4 Injection Number : 1
 Run Time Bar Code: Sequence Line : 10
 Acquired on : 22 Apr 95 08:42 PM Instrument Method: BX20422.MTH
 Report Created on: 24 Apr 95 06:44 PM Analysis Method : BX20422.MTH
 Last Recalib on : 24 APR 95 06:19 PM Sample Amount : 0
 Multiplier : 5000 ISTD Amount :
 Sample Info : 95-1182; ,MW-2 9 1/2-10 1/2;2.5 UL SOIL EXTRACT OF 4GRAMS/10
 ML
 MECH

Am 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-2 10.5-12	Client Project No.	: 722450.2602/SJ AFE
Lab Sample Number	: X05622	Lab Project No.	: 95-1182
Date Sampled	: 4/11/95	Dilution Factor	: 10000.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/23/95	Matrix	: Soil
Date Analyzed	: 4/23/95	Lab File No.	: BX2042313
% Moisture	: 20.84%	Method Blank No.	: MEB042395

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	13000 J	51000
Toluene	108-88-3	130000	51000
Chlorobenzene	108-90-7	15000 J	51000
Ethyl Benzene	100-41-4	130000	51000
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	680000 B	51000
,3,5-Trimethylbenzene	108-67-8	190000 B	51000
1,2,4-Trimethylbenzene	95-63-6	540000	51000
1,2,3-Trimethylbenzene	526-73-8	130000 B	51000
1,2,3,4-Tetramethylbenzene	488-23-3	230000	51000
Surrogate Recovery (α,α,α -Trifluorotoluene):		102%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

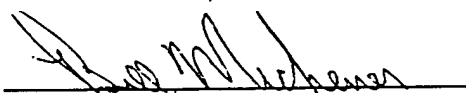
U = Compound analyzed for, but not detected.


B = Compound also found in the blank.

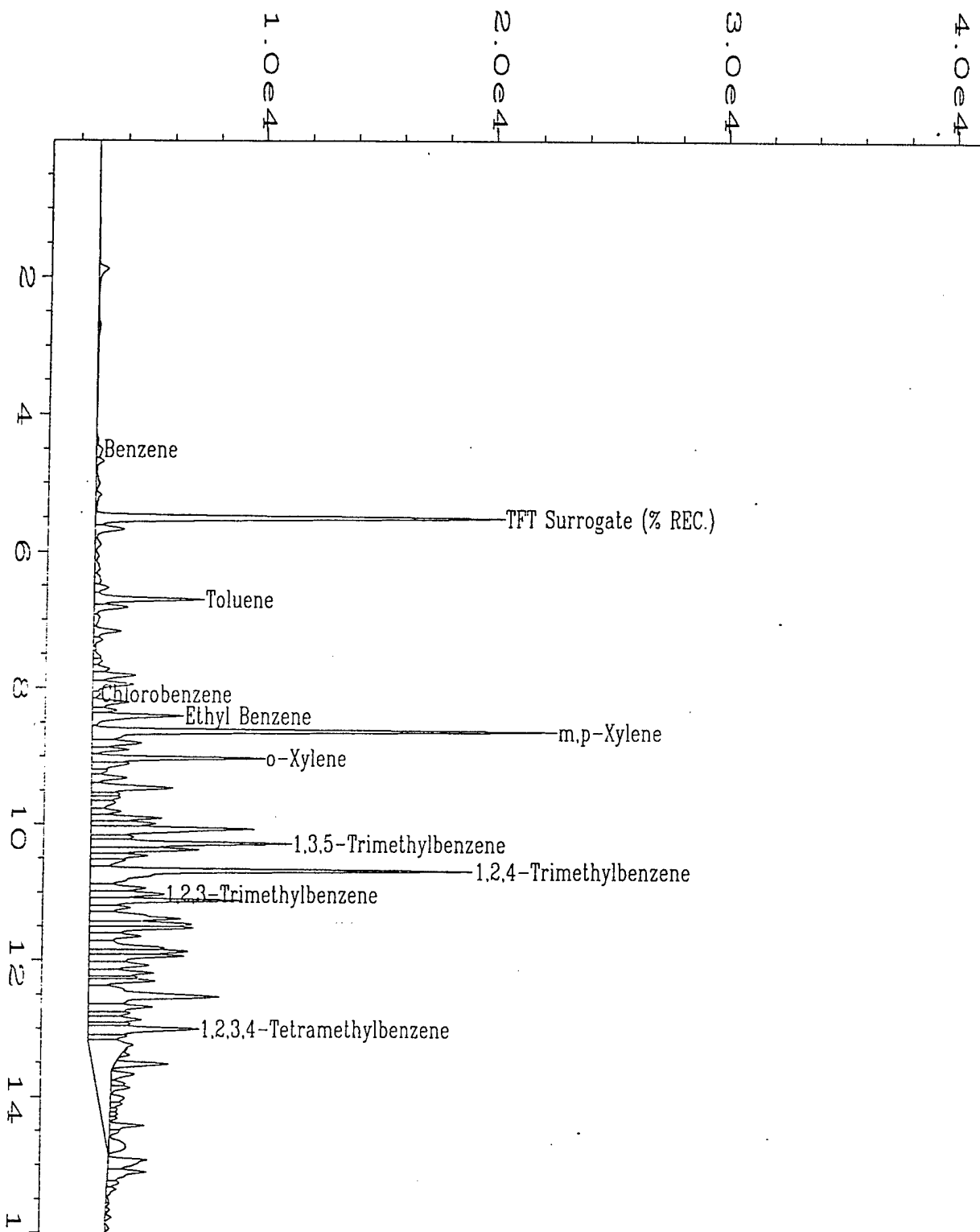
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

A = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20423\013R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05622;10000;1	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20423.MTH
Acquired on	: 23 Apr 95 04:01 PM	Analysis Method	: BX20423.MTH
Report Created on:	25 Apr 95 04:49 PM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 04:27 PM	ISTD Amount	:
Multiplier	: 1e+004		
Sample Info	: 95-1182; MW-2 10 1/2-12';10 UL SOIL EXTRACT OF 1GRAMS/10 ML MEOH		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number : MW-4 13.5-15
Lab Sample Number : X05623
Date Sampled : 4/11/95
Date Received : 4/12/95
Date Extracted/Prepared : 4/20/95
Date Analyzed : 4/21/95
% Moisture : 12.71%

Client Project No. : 722450.2602/SJ AF
Lab Project No. : 95-1182
Dilution Factor : 1.00
Method : 8020
Matrix : Soil
Lab File No. : BX1042024
Method Blank No. : MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	4.6
Toluene	108-88-3	1.1 J	4.6
Chlorobenzene	108-90-7	1.9 J	4.6
Ethyl Benzene	100-41-4	1.4 J	4.6
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	11	4.6
1,3,5-Trimethylbenzene	108-67-8	5.6	4.6
1,2,4-Trimethylbenzene	95-63-6	16	4.6
1,2,3-Trimethylbenzene	526-73-8	7.3	4.6
1,2,3,4-Tetramethylbenzene	488-23-3	11	4.6
Surrogate Recovery (α,α,α -Trifluorotoluene):		76%	50%-150% (QC limit)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

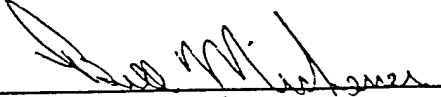
U = Compound analyzed for, but not detected.

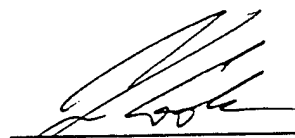
B = Compound also found in the blank.

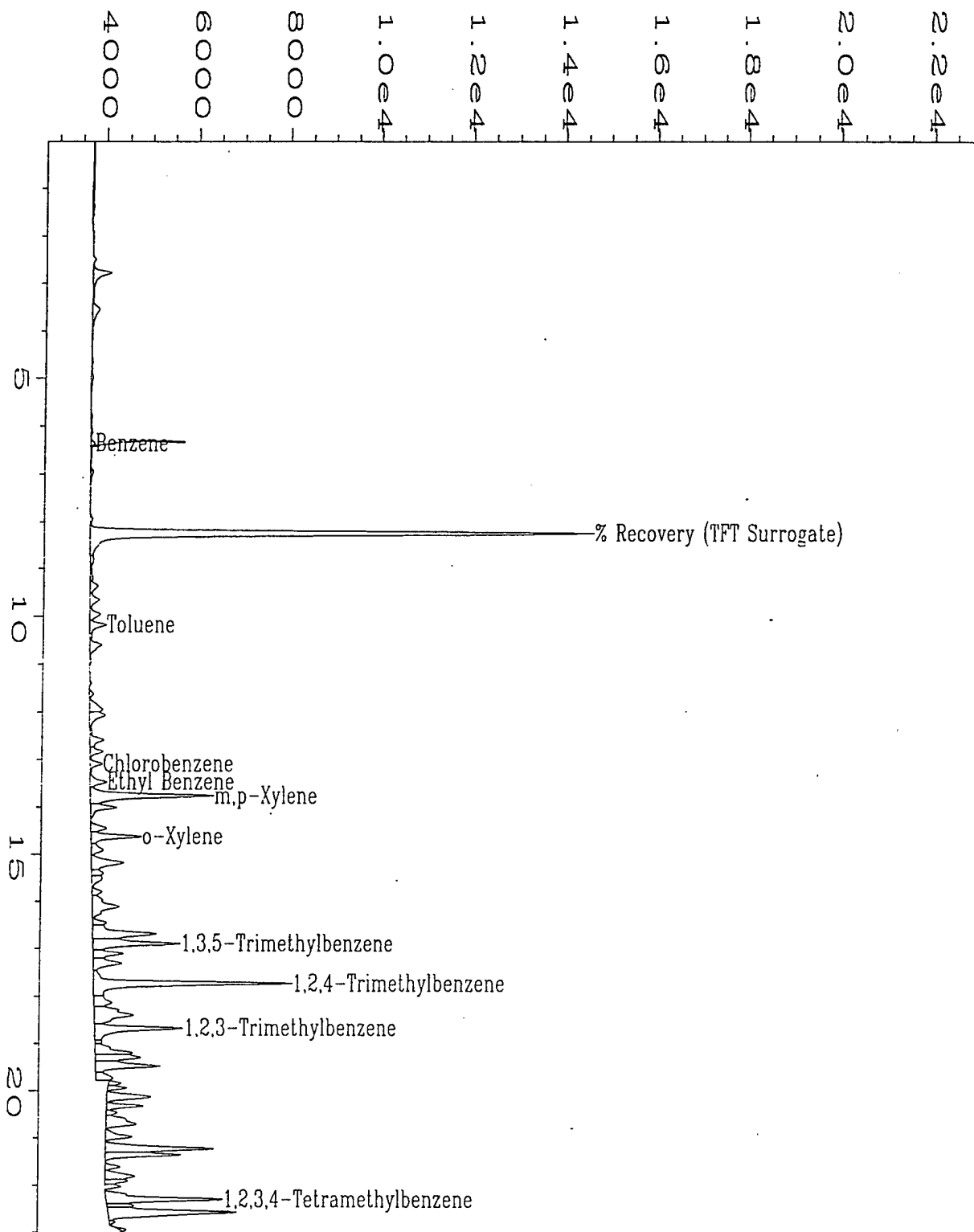
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

IA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10420\024F0701.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 24
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05623;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	BX10420.MTH
Acquired on	: 21 Apr 95 00:37 AM	Analysis Method	: BX10420B.MTH
Report Created on:	21 Apr 95 12:45 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 12:15 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT#: 95-1182 CLIENT#: MW-4 13 1/2-15 SOIL		

SW 4/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-4 12--13.5	Client Project No.	: 722450.2602/SJ AFE
Lab Sample Number	: X05624	Lab Project No.	: 95-1182
Date Sampled	: 4/11/95	Dilution Factor	: 5000.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/22/95	Lab File No.	: BX2042217
% Moisture	: 21.33%	Method Blank No.	: MEB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	**	25000
Toluene	108-88-3	23000	25000
Chlorobenzene	108-90-7	**	25000
Ethyl Benzene	100-41-4	4100 J	25000
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	200000	25000
,3,5-Trimethylbenzene	108-67-8	31000	25000
1,2,4-Trimethylbenzene	95-63-6	220000	25000
1,2,3-Trimethylbenzene	526-73-8	17000 J	25000
1,2,3,4-Tetramethylbenzene	488-23-3	11000 J	25000
Surrogate Recovery (α,α,α -Trifluorotoluene):		100%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

** = See BX1042028 (DF = 125).

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

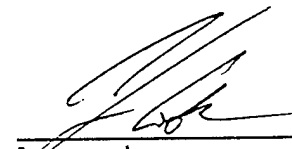
B = Compound also found in the blank.

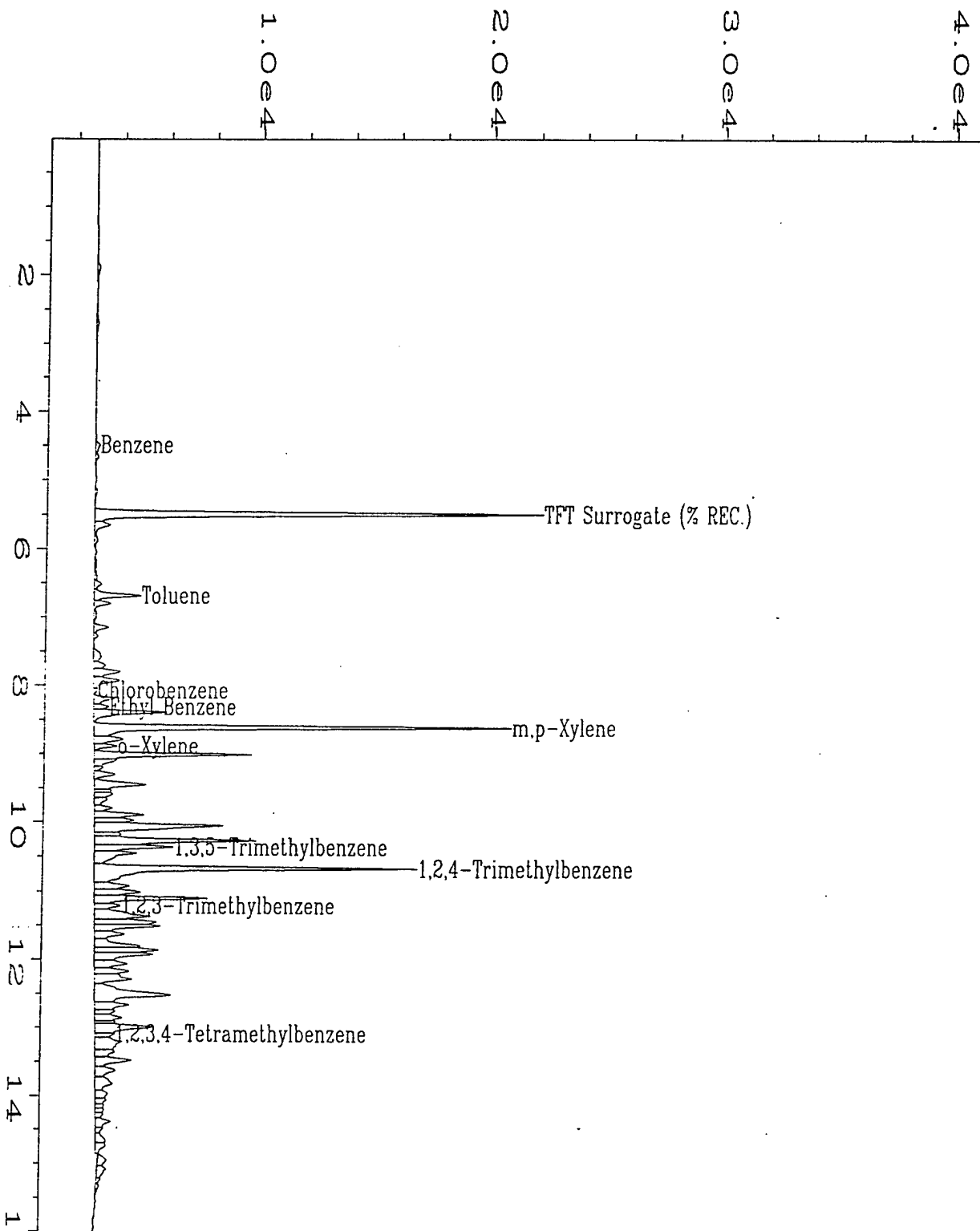
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

\ = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20422\017R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 17
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05624;5000;4	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20422.MTH
Acquired on	: 22 Apr 95 08:06 PM	Analysis Method	: BX20422.MTH
Report Created on:	25 Apr 95 01:52 PM	Sample Amount	: 0
Last Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 5000		
Sample Info	: 95-1182; MW-4 12-13 1/2;2.5 UL SOIL EXTRACT OF 4GRAMS/10 ML MEOH		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-4 12-13.5	Client Project No.	: 722450.2602/SJ AFE
Lab Sample Number	: X05624	Lab Project No.	: 95-1182
Date Sampled	: 4/11/95	Dilution Factor	: 125.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/20/95	Matrix	: Soil
Date Analyzed	: 4/21/95	Lab File No.	: BX1042028
% Moisture	: 21.33%	Method Blank No.	: MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	740	640
Toluene	108-88-3	**	640
Chlorobenzene	108-90-7	2800	640
Ethyl Benzene	100-41-4	**	640
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	640
,3,5-Trimethylbenzene	108-67-8	**	640
1,2,4-Trimethylbenzene	95-63-6	**	640
1,2,3-Trimethylbenzene	526-73-8	**	640
1,2,3,4-Tetramethylbenzene	488-23-3	**	640
Surrogate Recovery (α,α,α -Trifluorotoluene):		114%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

** = See BX2042217 (DF = 5000).

QUALIFIERS:

E = Extrapolated value.

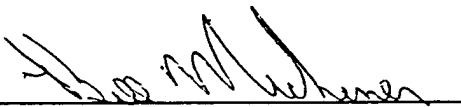
U = Compound analyzed for, but not detected.

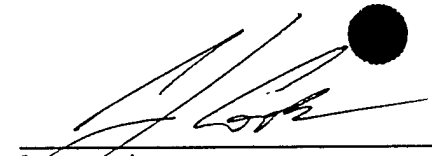
B = Compound also found in the blank.

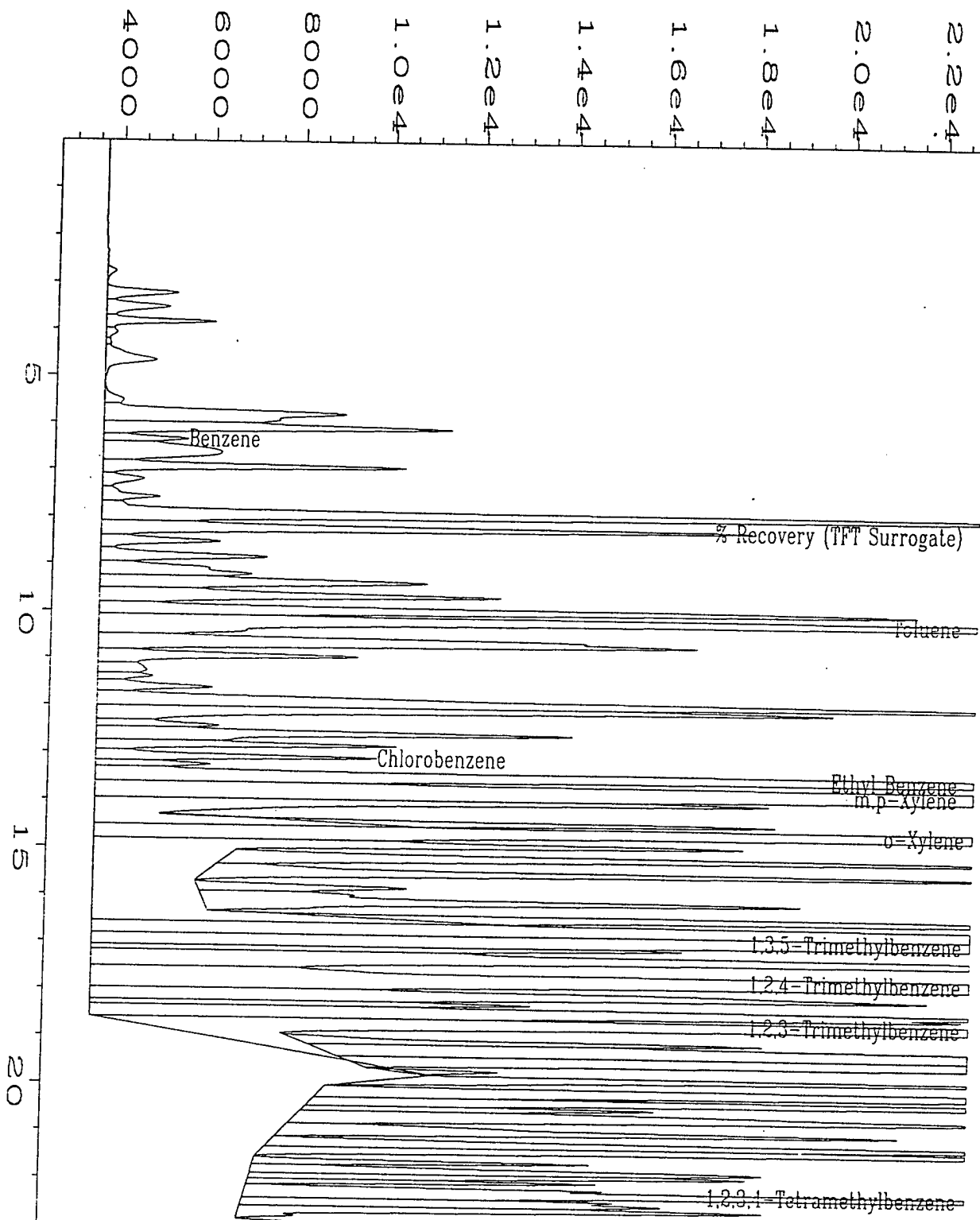
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10420\028F0701.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 28
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05624;125;4	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: BX10420.MTH
Acquired on	: 21 Apr 95 03:15 AM	Analysis Method	: BX10420B.MTH
Report Created on	: 21 Apr 95 12:51 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 12:15 PM	ISTD Amount	:
Multiplier	: 125		
Sample Info	: PROJECT#: 95-1182 CLIENT#: MW-4 12-13 1/2 SOIL/EXT.		

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Method 8020 Data Report

Client Sample Number	: MW-5 13-14.5	Client Project No.	: 722450.2602/SJ AFE
Lab Sample Number	: X05625	Lab Project No.	: 95-1182
Date Sampled	: 4/11/95	Dilution Factor	: 1.00
Date Received	: 4/12/95	Method	: 8020
Date Extracted/Prepared	: 4/20/95	Matrix	: Soil
Date Analyzed	: 4/21/95	Lab File No.	: BX1042025
% Moisture	: 22.72%	Method Blank No.	: MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	5.2
Toluene	108-88-3	0.7 J	5.2
Chlorobenzene	108-90-7	U	5.2
Ethyl Benzene	100-41-4	U	5.2
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	2.3 J	5.2
,3,5-Trimethylbenzene	108-67-8	0.6 J	5.2
1,2,4-Trimethylbenzene	95-63-6	0.8 J	5.2
1,2,3-Trimethylbenzene	526-73-8	0.6 J	5.2
1,2,3,4-Tetramethylbenzene	488-23-3	U	5.2
Surrogate Recovery (α,α,α -Trifluorotoluene):		68%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

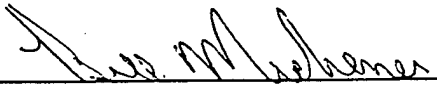
U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

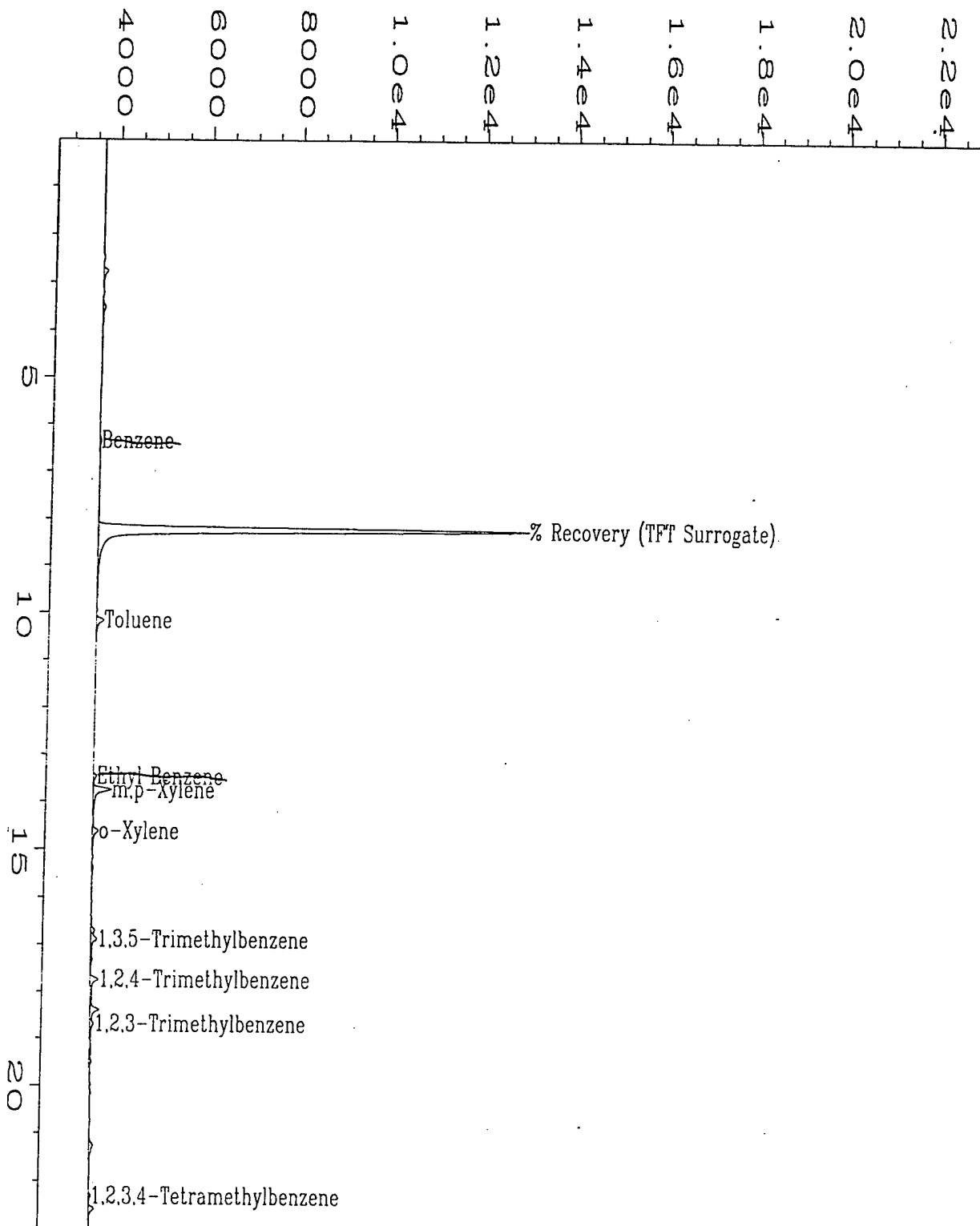
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10420\025F0701.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 25
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05625;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	BX10420.MTH
Acquired on	: 21 Apr 95 01:16 AM	Analysis Method	: BX10420B.MTH
Report Created on:	21 Apr 95 12:46 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 12:15 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT#: 95-1182 CLIENT#: MW-5 13-14 SOIL		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042095	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/20/95	Method	: 602
Date Analyzed	: 4/20/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX10420008

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.7	83.5	71.0-119.0*
Toluene	108-88-3	16.4	82.0	73.0-111.0*
Chlorobenzene	108-90-7	17.1	85.5	64.0-119.0*
Ethyl Benzene	100-41-4	18.8	94.0	75.0-114.0*
m,p-Xylene	108-38-3	18.5	92.5	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	16.2	81.0	64.0-111.0*
1,3,5-Trimethylbenzene	108-67-8	18.1	90.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	20.1	100.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.1	90.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		102%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

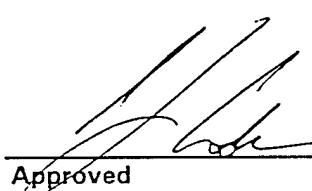
U = Compound analyzed for, but not detected.

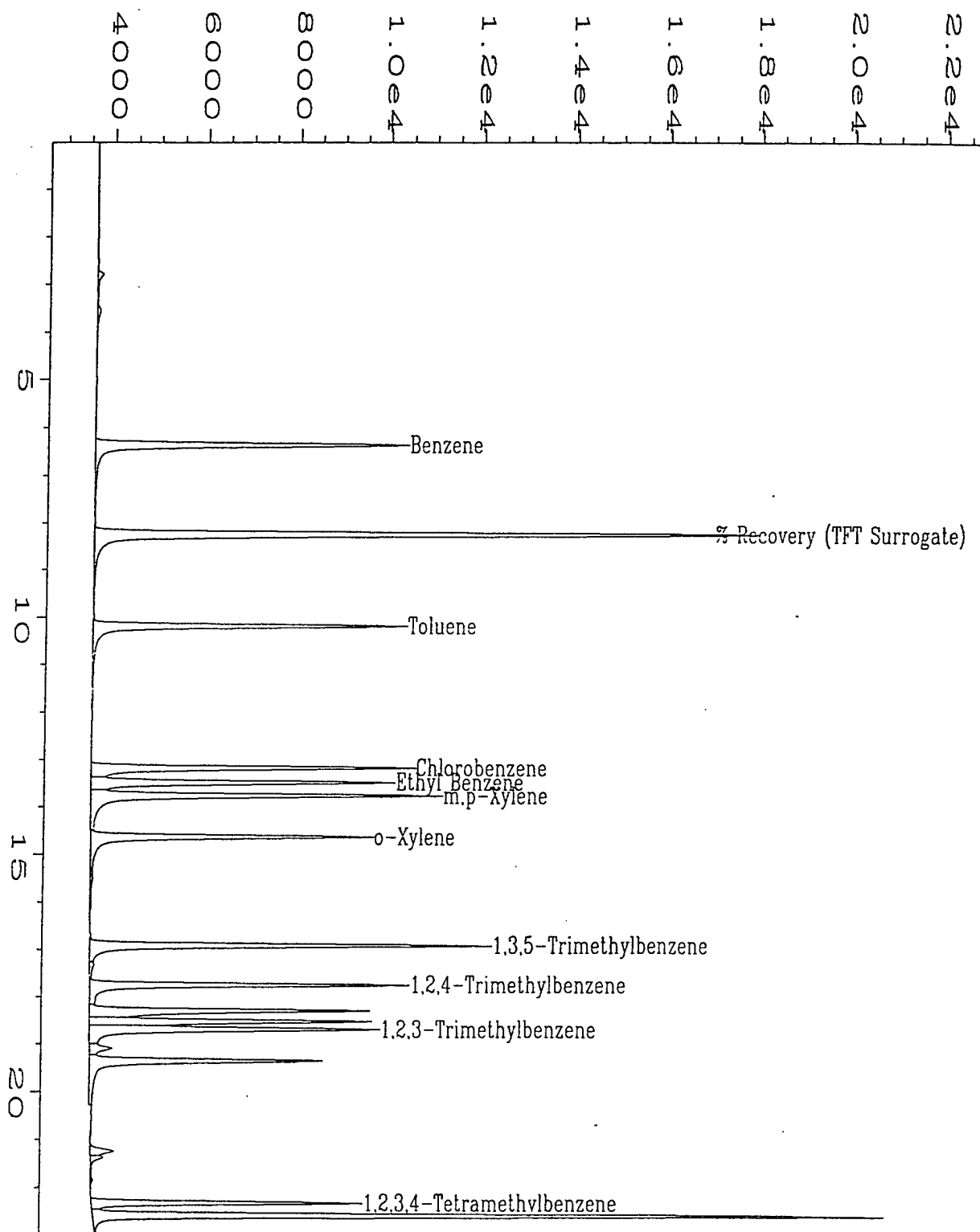
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10420\008F0701.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 8
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: LCS042095	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: BX10420.MTH
Acquired on	: 20 Apr 95 01:56 PM	Analysis Method	: BX10420B.MTH
Report Created on	: 21 Apr 95 12:38 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 12:15 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042295	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/22/95	Method	: 602
Date Analyzed	: 4/22/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2042210

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	19.0	95.0	71.0-119.0*
Toluene	108-88-3	19.4	97.0	73.0-111.0*
Chlorobenzene	108-90-7	20.3	102	64.0-119.0*
Ethyl Benzene	100-41-4	19.9	99.5	75.0-114.0*
m,p-Xylene	108-38-3	18.7	93.5	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	19.7	98.5	64.0-112.0*
1,3,5-Trimethylbenzene	108-67-8	20.9	105	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	19.4	97.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	21.3	107	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.5	92.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		98%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

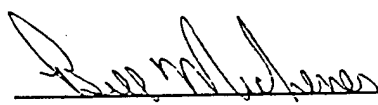
E = Extrapolated value

U = Compound analyzed for, but not detected.

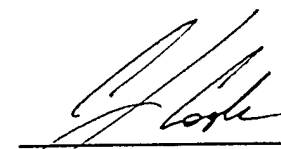
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

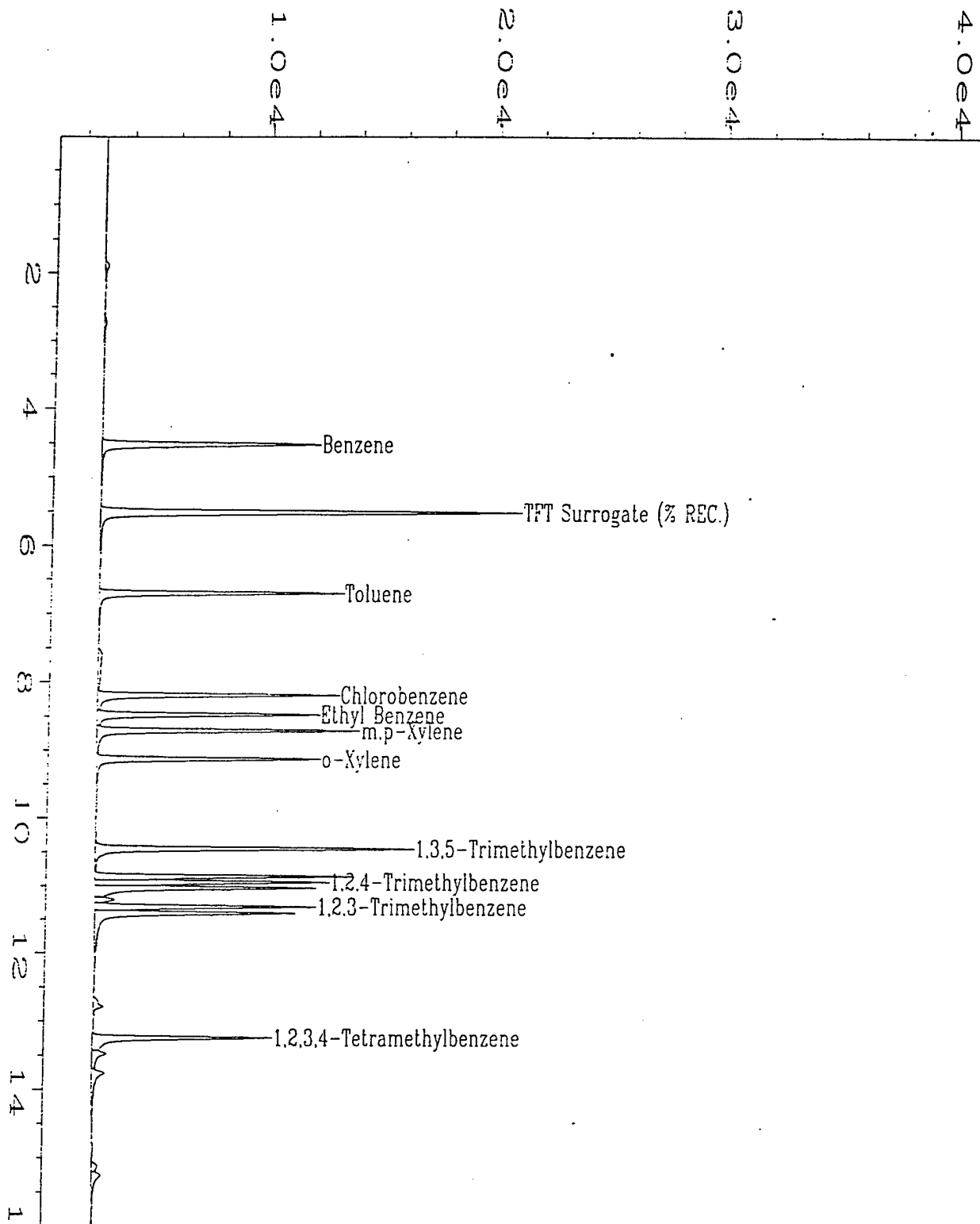
NA = Not available/Not analyzed.



Analyst



Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20422\010R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS042295	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20422.MTH
Acquired on	: 22 Apr 95 03:15 PM	Analysis Method	: BX20422.MTH
Report Created on	: 24 Apr 95 06:36 PM	Sample Amount	: 0
Last Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042395	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/23/95	Method	: 602
Date Analyzed	: 4/23/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX20423009

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.0	90.0	71.0-119.0*
Toluene	108-88-3	18.2	91.0	73.0-111.0*
Chlorobenzene	108-90-7	18.6	93.0	64.0-119.0*
Ethyl Benzene	100-41-4	18.8	94.0	75.0-114.0*
m,p-Xylene	108-38-3	20.0	100	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	18.4	92.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	19.6	98.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.1	90.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.1	95.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	20.8	104	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		103%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

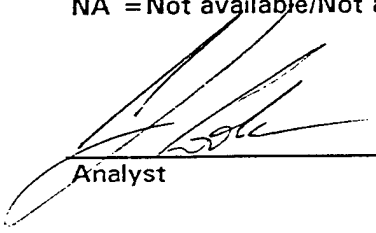
E = Extrapolated value

U = Compound analyzed for, but not detected.

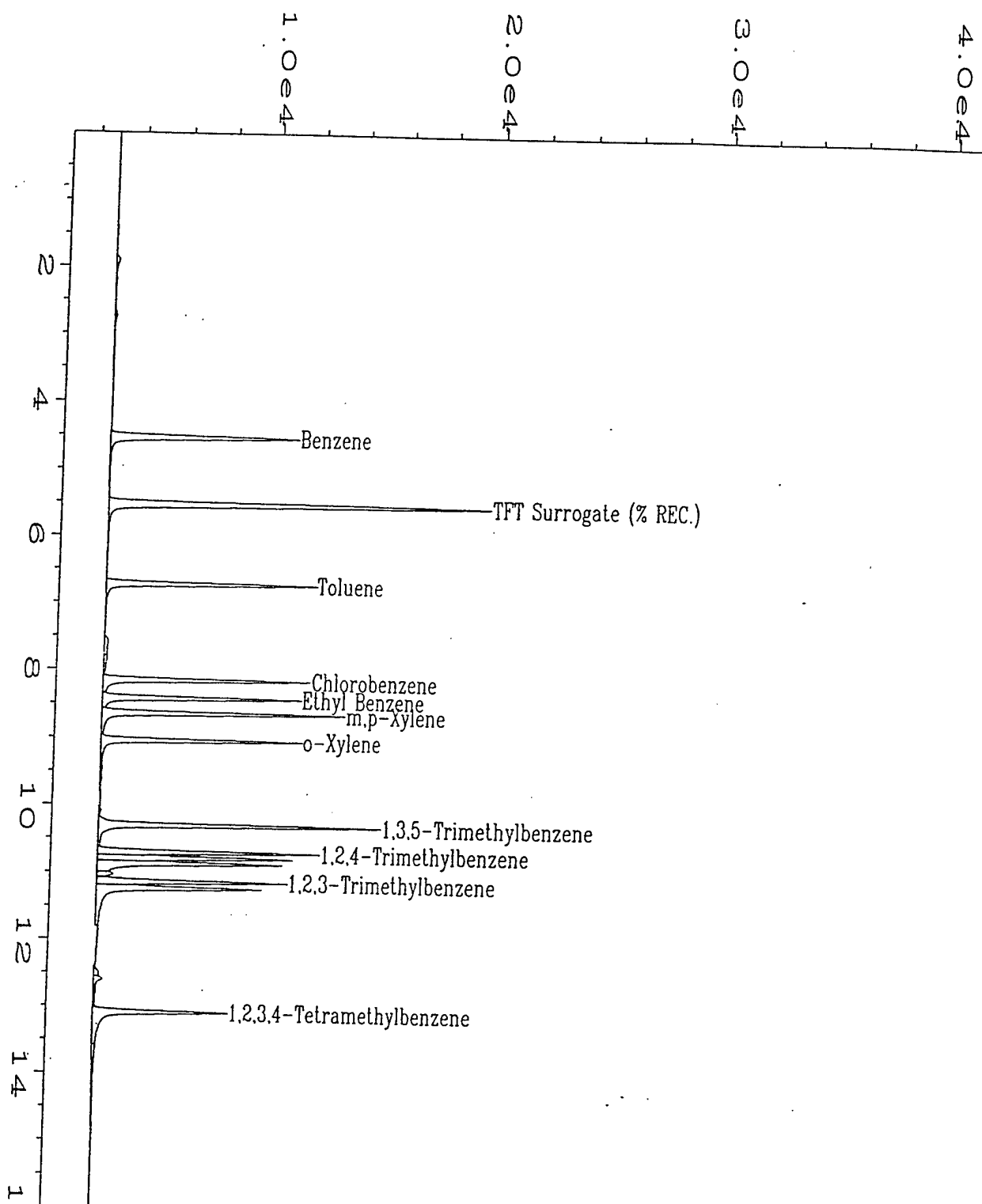
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.


Analyst


Approved



Data File Name : D:\2\DATA\BX20423\009R0901.D
 Operator : T.Lockwood
 Instrument : BTEX2
 Sample Name : LCS042395
 Run Time Bar Code:
 Acquired on : 23 Apr 95 01:38 PM
 Created on : 25 Apr 95 04:31 PM
 Last Recalib on : 25 Apr 95 04:27 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 9
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX20423.MTH
 Analysis Method : BX20423.MTH
 Sample Amount : 0
 ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 4/10,11/95	Client Project Number	: 722450.2602/SEYMORE
Date Received	: 4/12/95	Lab Project Number	: 95-1182
Date Prepared	: 4/21,24/95	Matrix	: Soil
Date Analyzed	: 4/21,24/95	Method Number	: EPA 5030/8015 Modified

Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH* mg/Kg	RL* mg/Kg
MB042195	METHOD BLANK	100%	U	0.1
MB042495	METHOD BLANK	100%	U	0.1
X05620	MW-1 12-14	119%	U	0.13
X05621	MW-2 9 1/2-10 1/2	99%	660	6.2
X05621 DUP	MW-2 9 1/2-10 1/2	118%	570	6.2
X05622	MW-2 10 1/2-12	**	3800 E	6.3
X05623	MW-4 13 1/2-15	105%	U	0.11
X05624	MW-4 12-13 1/2	114%	3200 E	6.4
X05625	MW-5 13-14 1/2	110%	U	0.13

* = Based on a dry weight basis.

** = Unable to separate surrogate from analyte.


QUALIFIERS

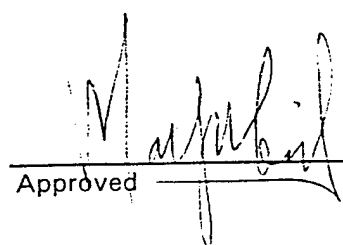
U = TVH analyzed for but not detected.

B = TVH found in blank also.

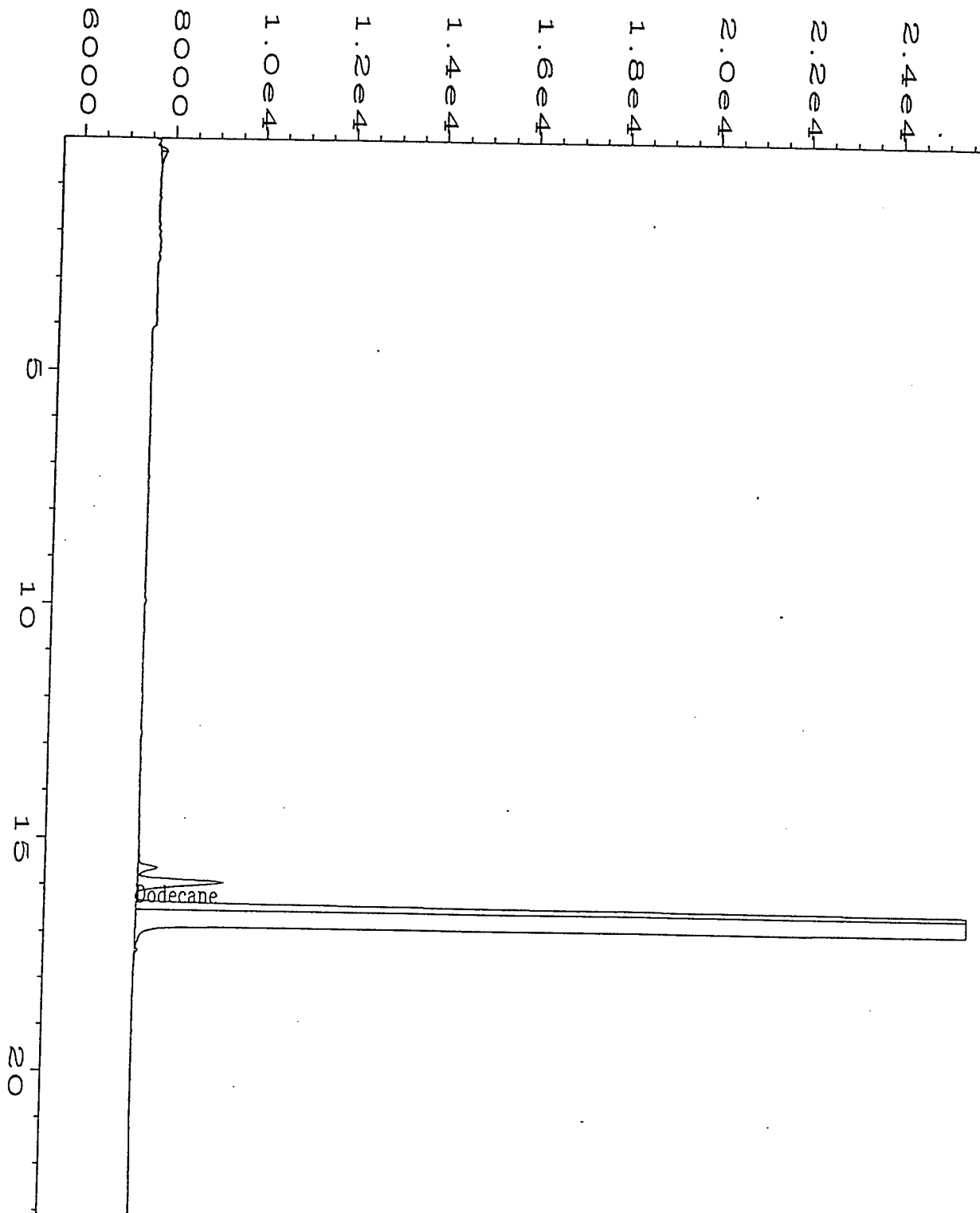
E = Extrapolated value.

RL = Reporting Limit.

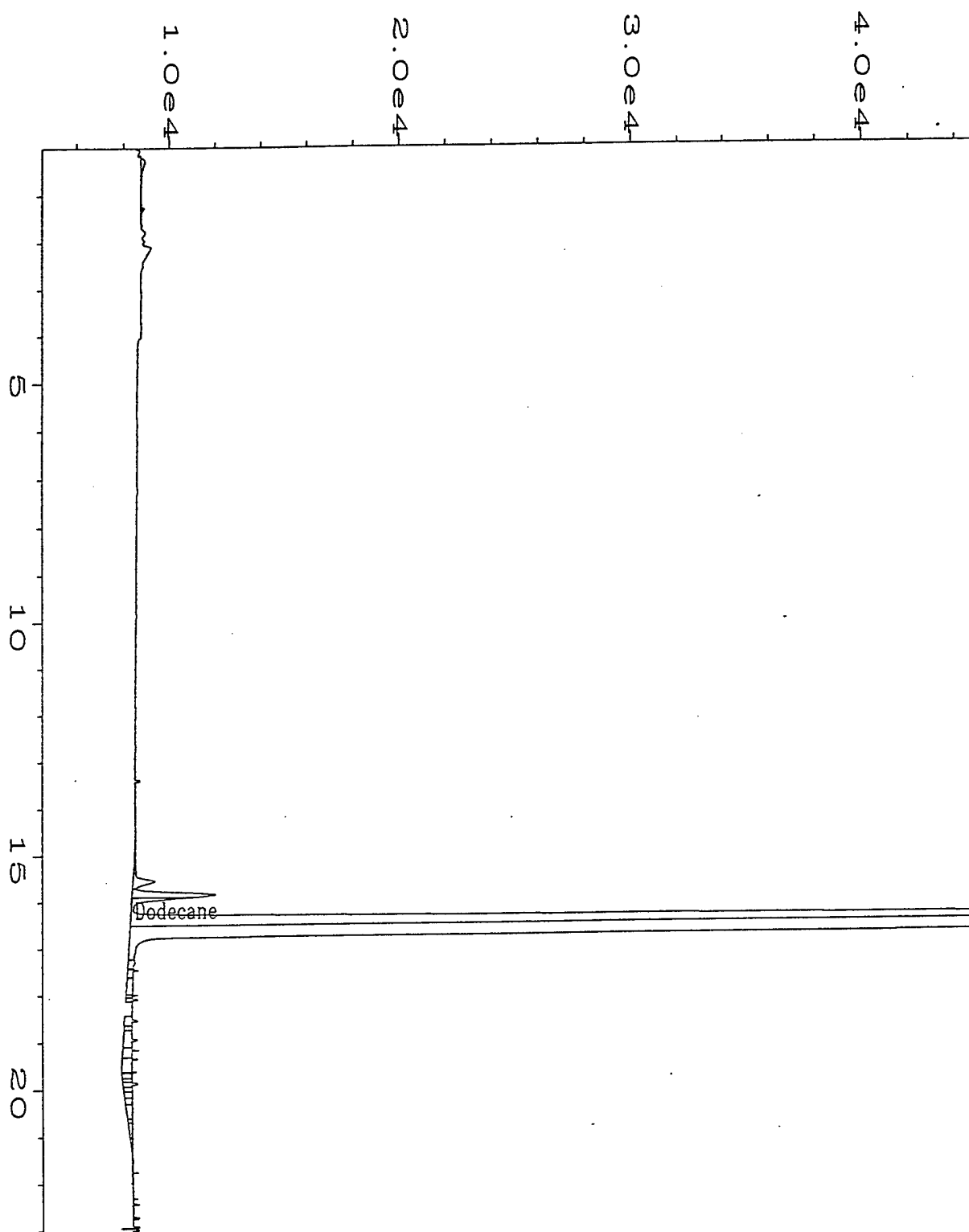

Analyst


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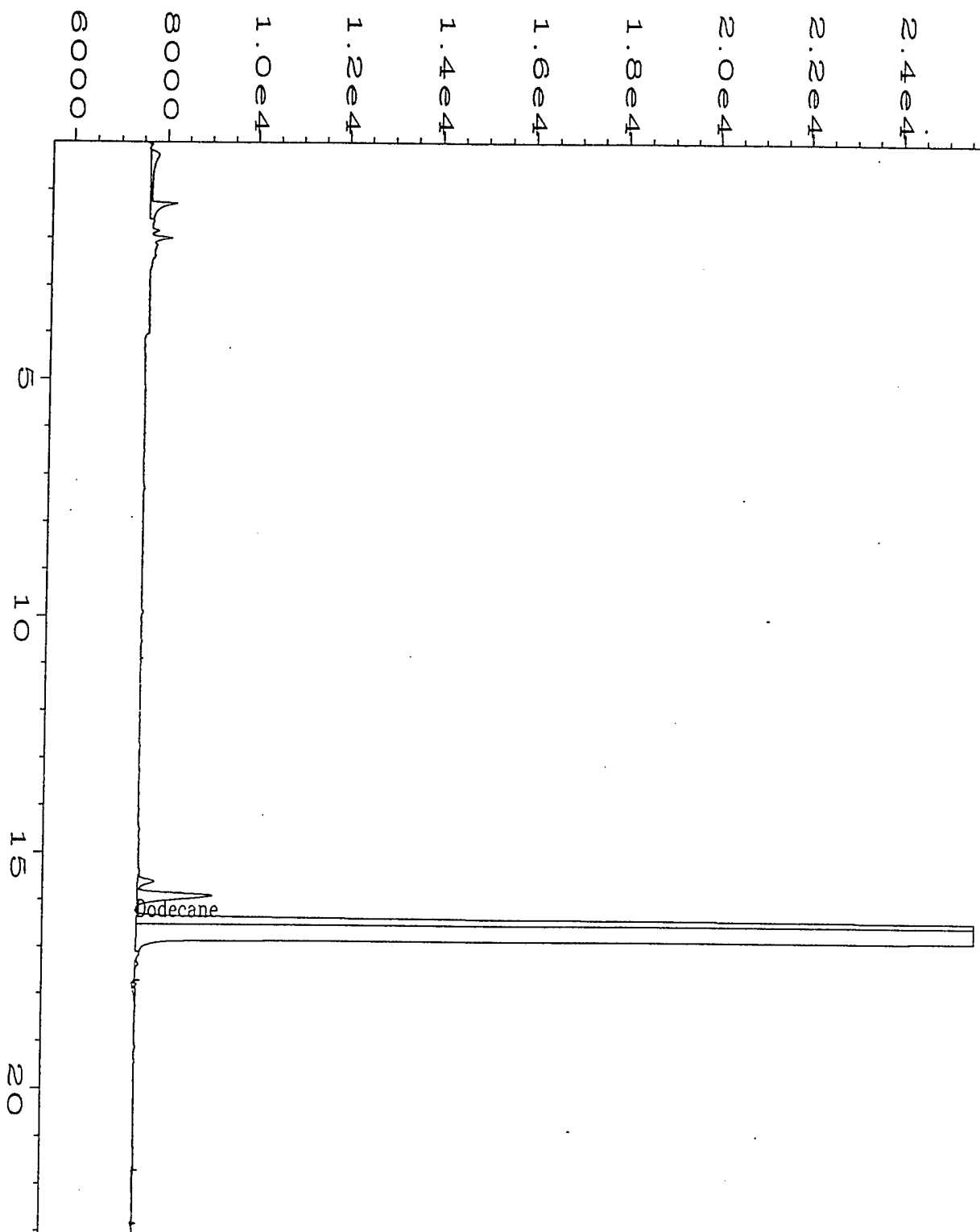
TVH1182.XLS



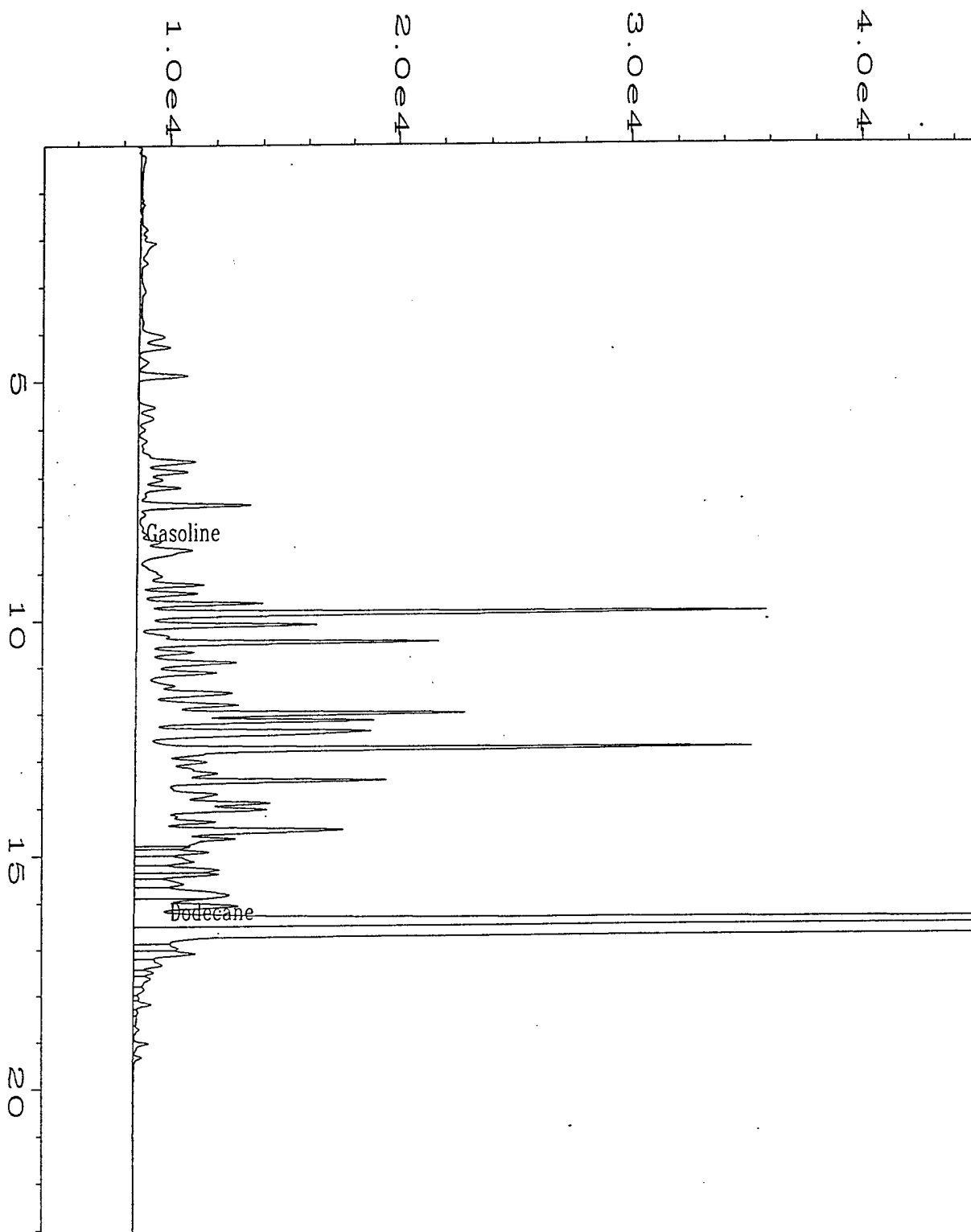
Data File Name	: C:\HPCHEM\1\DATA\tvh0421\010F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 10
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB042195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MTH
Acquired on	: 21 Apr 95 02:26 PM	Analysis Method	: TVH0421.MTH
Report Created on:	24 Apr 95 09:25 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 01:34 PM	ISTD Amount	:
Multiplier	: 1		



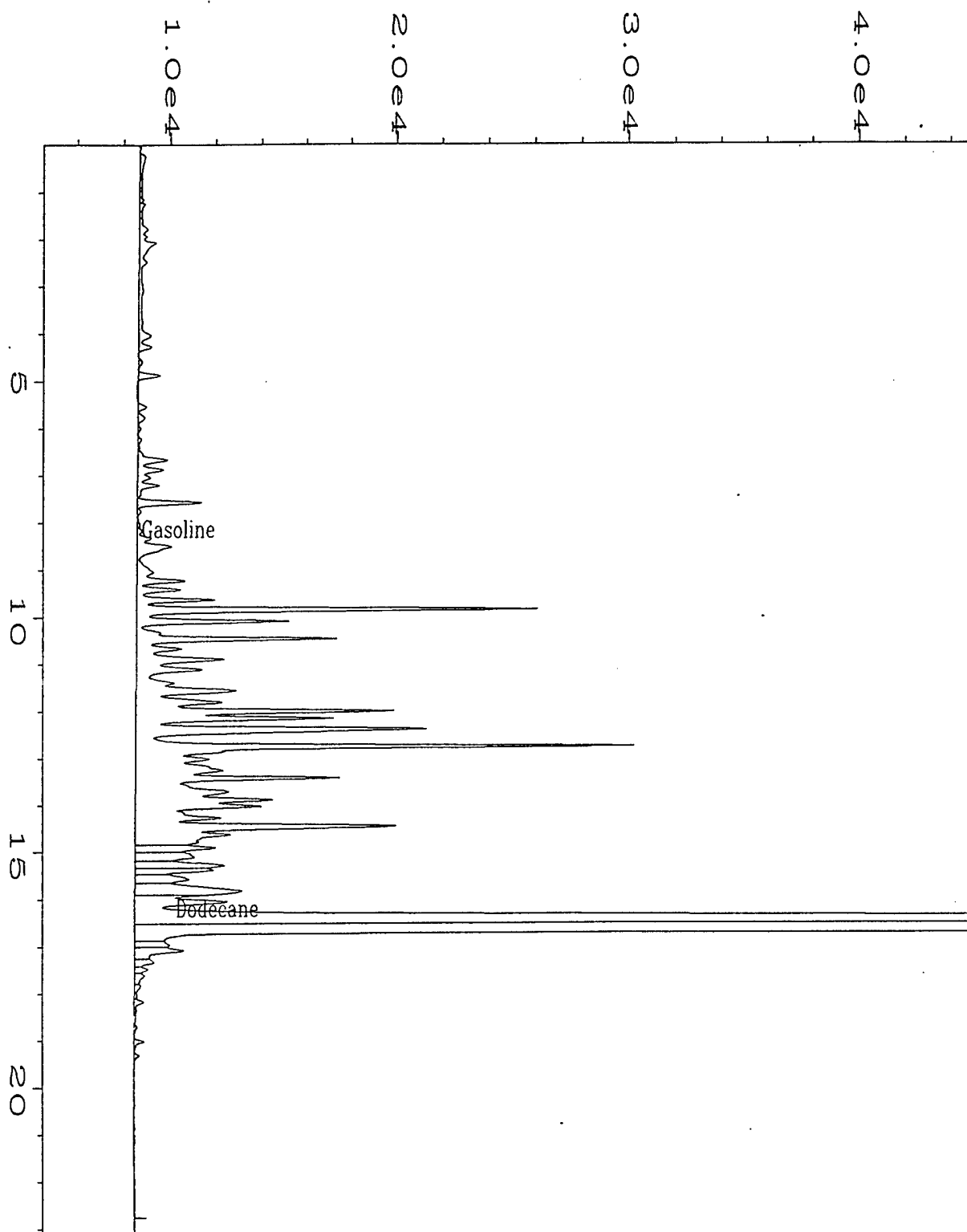
Data File Name	: C:\HPCHEM\1\DATA\tvh0424\009F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 9
Instrument	: TVH	Injection Number	: 1
Sample Name	: mb042495	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BAS
Acquired on	: 24 Apr 95 08:35 PM	Analysis Method	: TVH0424
Report Created on	: 25 Apr 95 00:26 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 00:21 AM	ISTD Amount	:
Multiplier	: 1		



Data File Name	: C:\HPCHEM\1\DATA\tvh0421\012F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 12
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05620;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MTH
Acquired on	: 21 Apr 95 03:46 PM	Analysis Method	: TVH0421.MTH
Report Created on:	24 Apr 95 09:25 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 01:34 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1182 CLIENT # MW-1 12-14 SOIL		

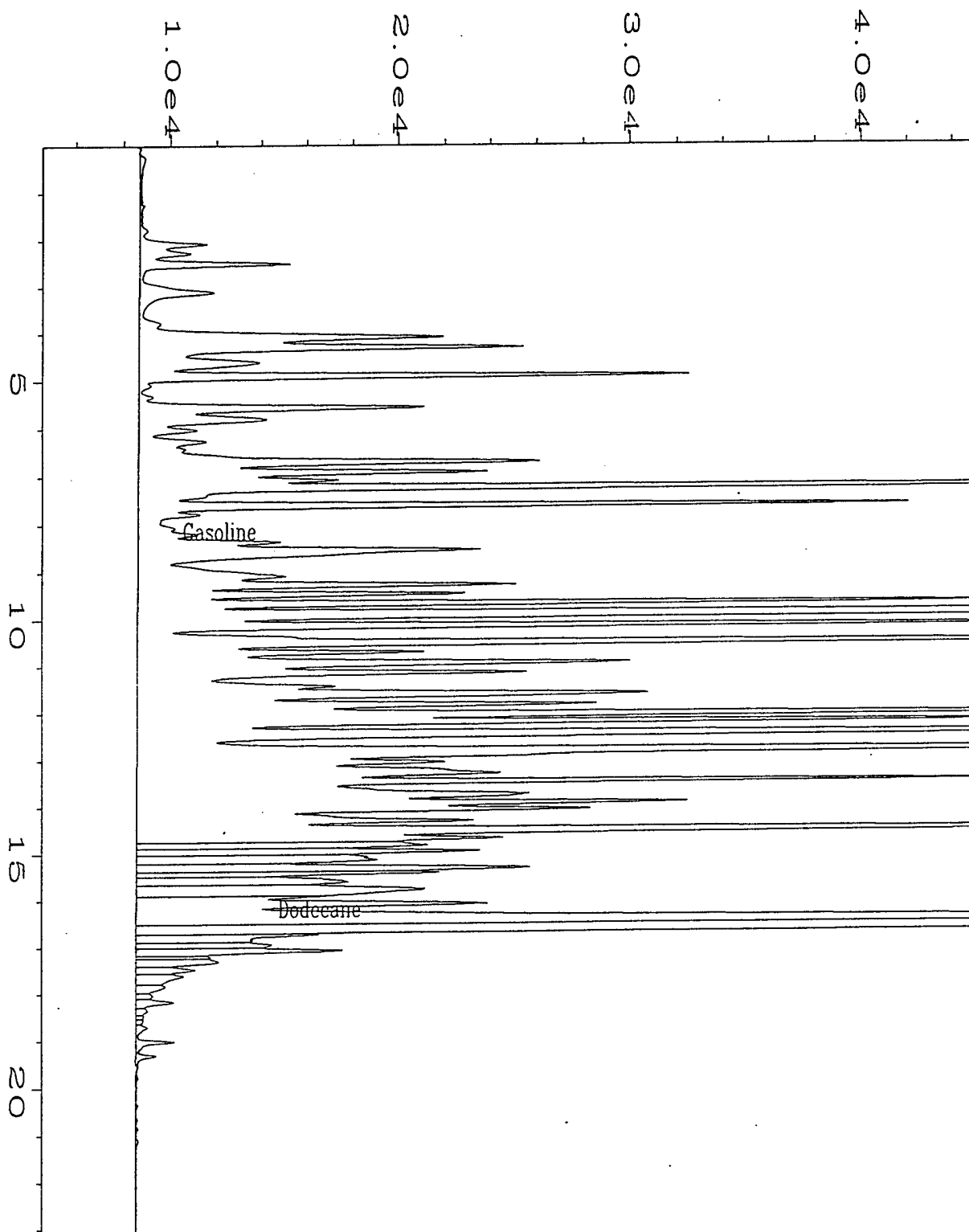


Data File Name	: C:\HPCHEM\1\DATA\tvh0424\010F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 10
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05621;50;.1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BA
Required on	: 24 Apr 95 09:11 PM	Analysis Method	: TVH0424
Report Created on	: 25 Apr 95 00:26 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 00:21 AM	ISTD Amount	:
Multiplier	: 50		
Sample Info	: PROJECT # 95-1182 CLIENT # MW-2 9 1/2-10 1/2 SOIL		

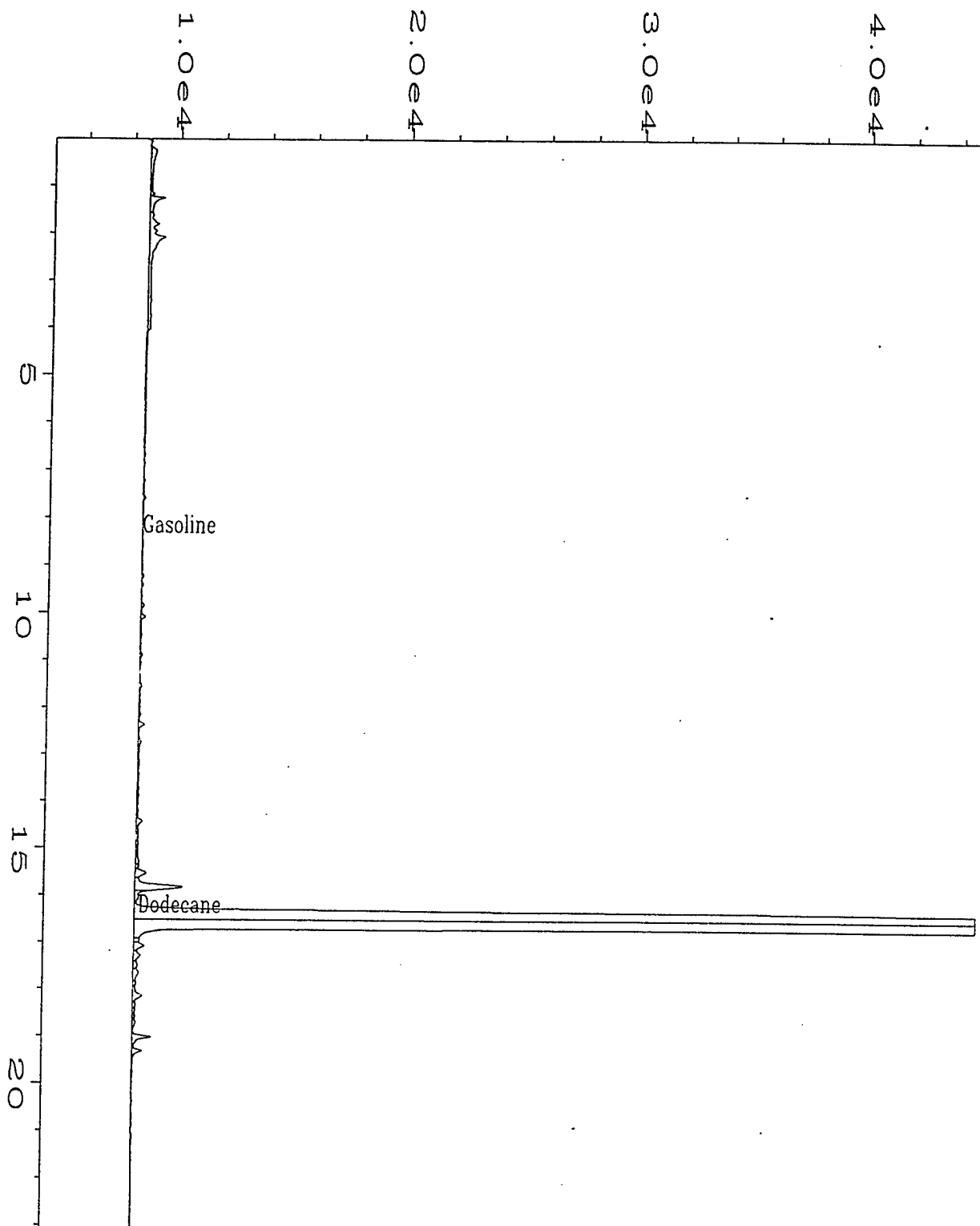


Data File Name	: C:\HPCHEM\1\DATA\tvh0424\011F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 11
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05621 DUP	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MT
quired on	: 24 Apr 95 09:47 PM	Analysis Method	: TVH0424.MTH
port Created on:	25 Apr 95 00:26 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 00:21 AM	ISTD Amount	:
Multiplier	: 50		

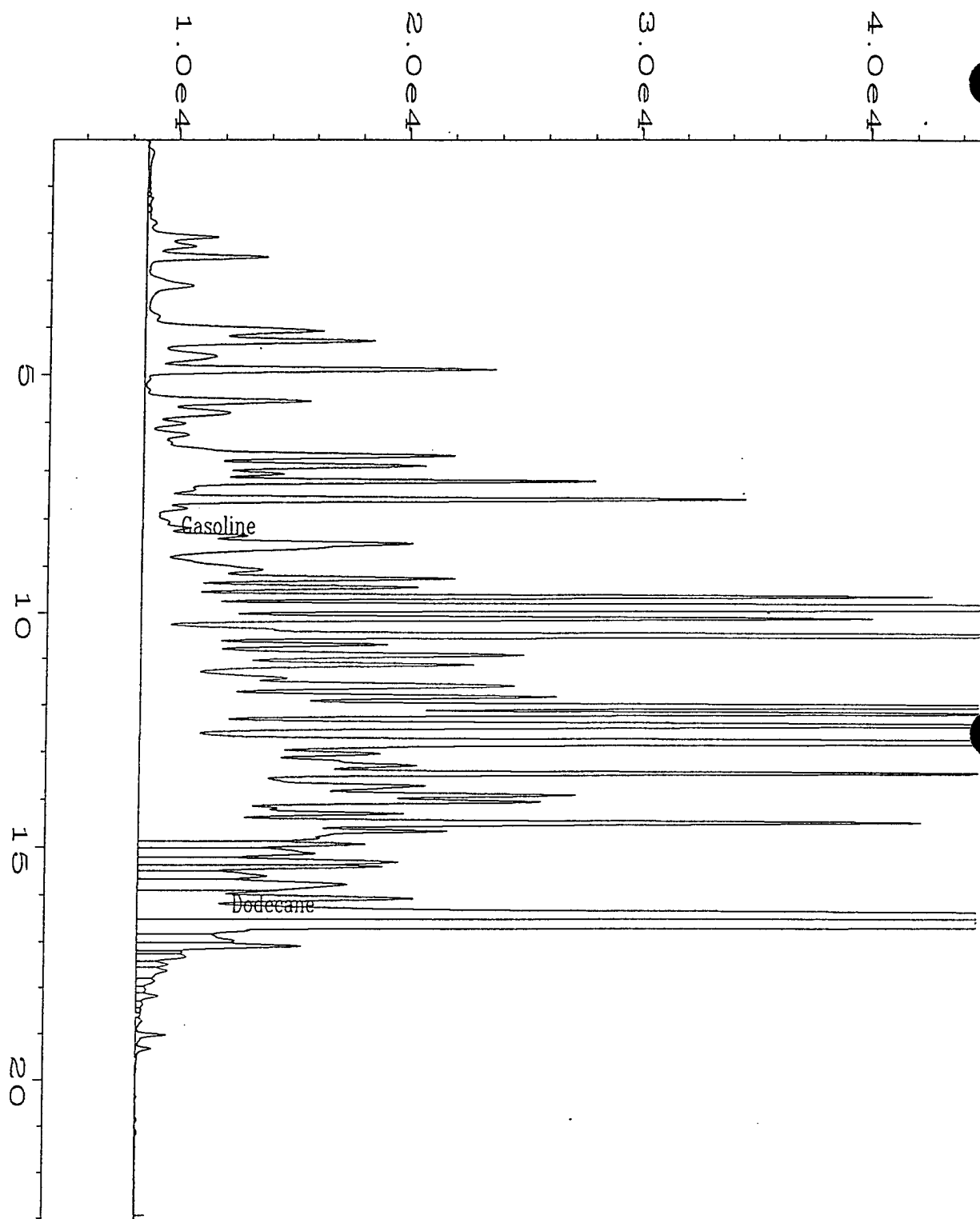
MW-2 9 1/2 - 10 1/2



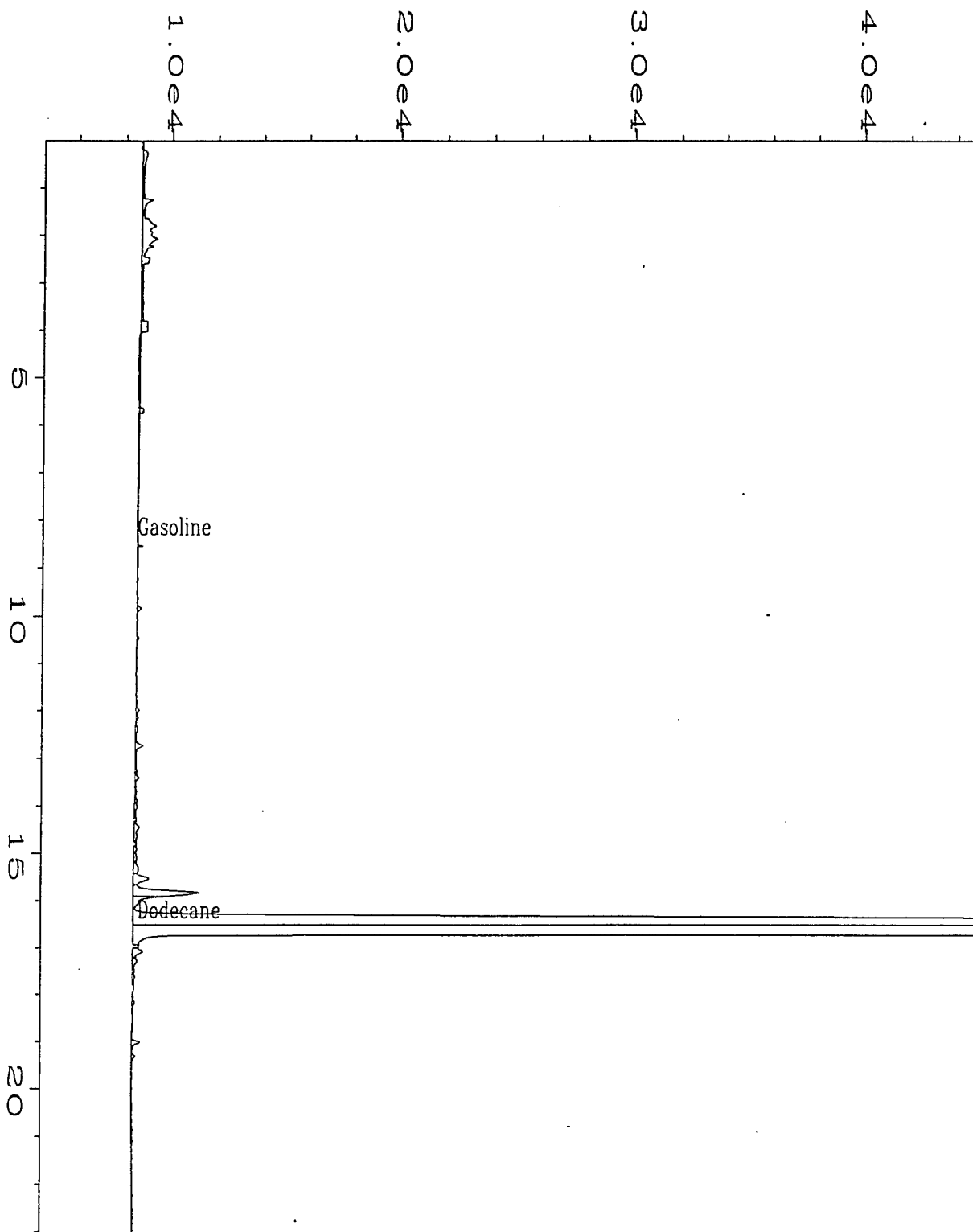
Data File Name	: C:\HPCHEM\1\DATA\tvh0424\012F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 12
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05622;50;.1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BA M
Acquired on	: 24 Apr 95 10:23 PM	Analysis Method	: TVH0424.MT
Report Created on:	25 Apr 95 00:26 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 00:21 AM	ISTD Amount	:
Multiplier	: 50		
Sample Info	: PROJECT # 95-1182 CLIENT # MW-2 10 1/2-12 SOIL		



Data File Name	: C:\HPCHEM\1\DATA\tvh0424\013F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 13
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05623;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Required on	: 24 Apr 95 10:59 PM	Analysis Method	: TVH0424.MTH
Report Created on:	: 25 Apr 95 00:26 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 00:21 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1182 CLIENT # MW-4 13 1/2-15 SOIL		



Data File Name	: C:\HPCHEM\1\DATA\tvh0424\014F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 14
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05624;50;.1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BA.M
Acquired on	: 24 Apr 95 11:35 PM	Analysis Method	: TVH0424.MT
Port Created on:	25 Apr 95 00:27 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 00:21 AM	ISTD Amount	:
Multiplier	: 50		
Sample Info	: PROJECT # 95-1182 CLIENT # MW-4 12-13 1/2 SOIL		



Data File Name	: C:\HPCHEM\1\DATA\TVH0424\015F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 15
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05625;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 25 Apr 95 00:11 AM	Analysis Method	: TVH0424.MTH
Report Created on	: 25 Apr 95 12:03 PM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 00:21 AM	ISTD Amount	:
Multiplier	: 1		

MW-5 13-14 1/2

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(303) 425-6021

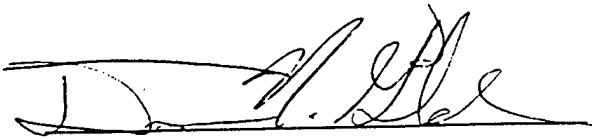
TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

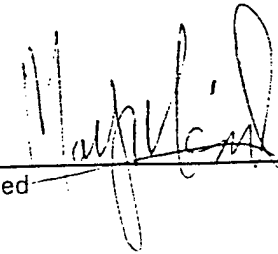
LCS Number : LCS042195 Matrix : SOIL
Date Prepared : 4/21/95 Method Numbers : EPA 5030/8015 Modified
Date Analyzed : 4/21/95
Sequence Number : TVH9

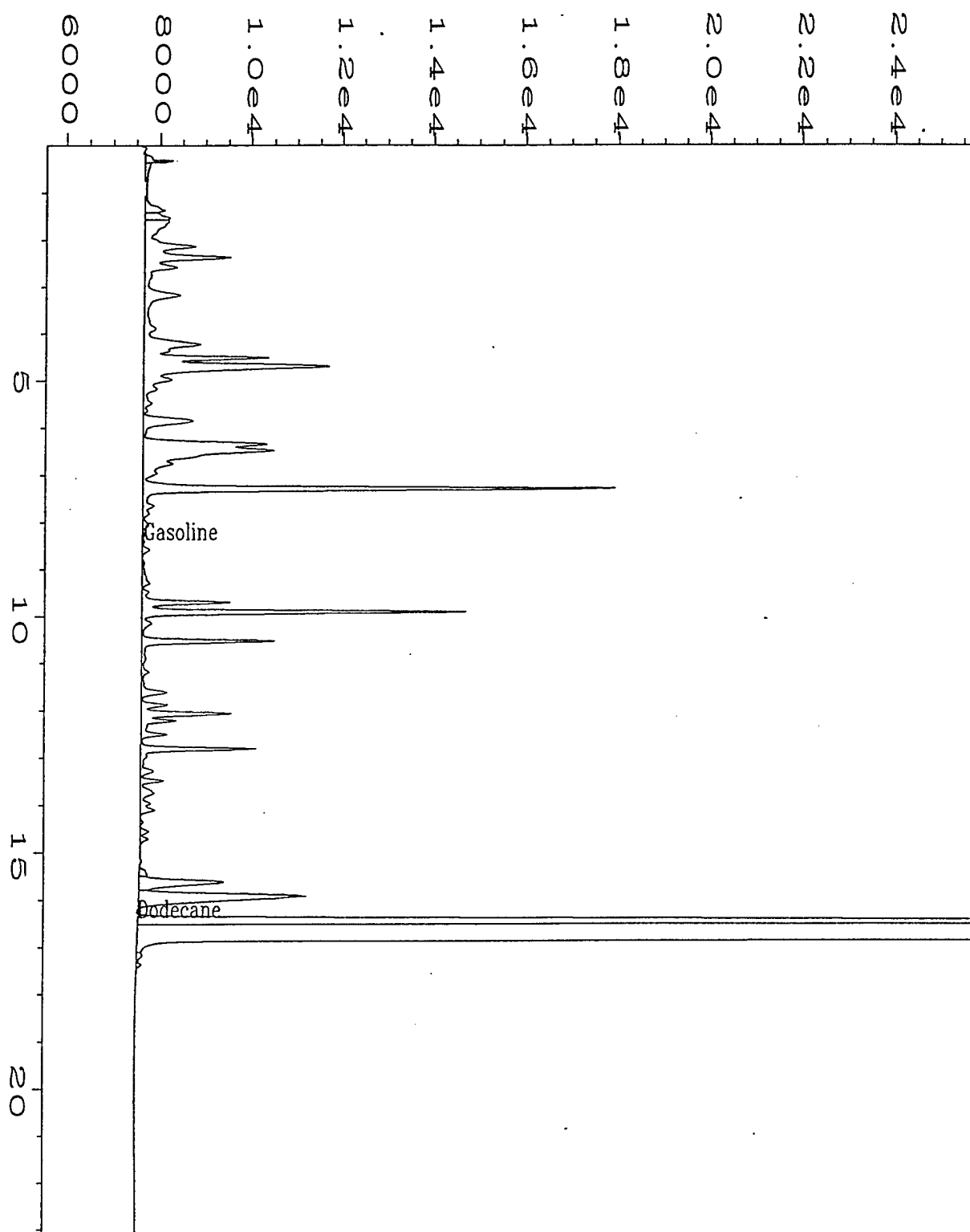
<u>Compound Name</u>	<u>Theoretical Concentration mg/kg</u>	<u>LCS Concentration mg/kg</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	5.00	5.85	117%	70%-130%

QUALIFIERS

U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\TVH0421\009F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 9
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS042195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MTH
Acquired on	: 21 Apr 95 01:46 PM	Analysis Method	: TVH0421.MTH
Report Created on:	08 May 95 09:52 AM	Sample Amount	: 0
Last Recalib on	: 24 APR 95 09:47 AM	ISTD Amount	:
Multiplier	: 1		

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TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

LCS Number : LCS042495 Matrix : SOIL
Date Prepared : 4/24/95 Method Numbers : EPA 5030/8015 Modified
Date Analyzed : 4/24/95
Sequence Number : TVH8

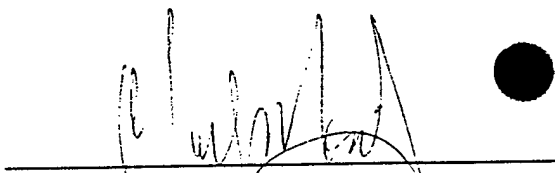
<u>Compound Name</u>	<u>Theoretical Concentration mg/kg</u>	<u>LCS Concentration mg/kg</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	5.00	5.91	118%	70%-130%

QUALIFIERS

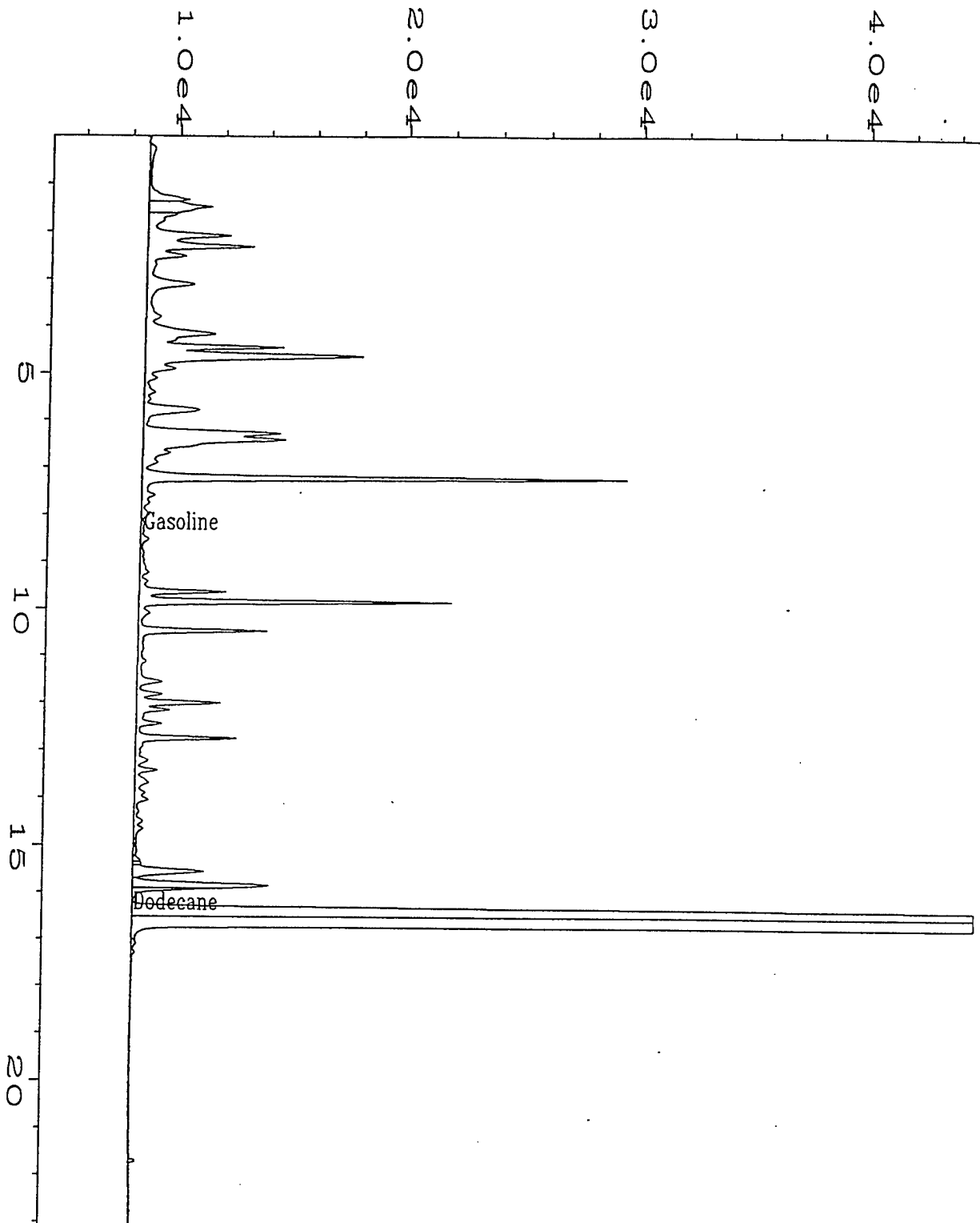
U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.



Analyst



Approved



Data File Name	: C:\HPCHEM\1\DATA\tvh0424\008F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 8
Instrument	: TVH	Injection Number	: 1
Sample Name	: lcs042495	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 24 Apr 95 07:59 PM	Analysis Method	: TVH0424.MTH
Report Created on	: 25 Apr 95 00:25 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 00:21 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
JET FUEL

Date Sampled	: 4/10,11/95	Client Project Number	: 722450.2602/SEYMORE
Date Received	: 4/12/95	Lab Project Number	: 95-1182
Date Prepared	: 4/13/95	Matrix	: Soil
Date Analyzed	: 4/18,19/95	Method Number	: 3500/Mod. 8015

Evergreen Sample #	Client Sample #	OTP Surrogate % Recovery	TEH Jet Fuel mg/Kg	RL mg/Kg
SB041395	SOIL METHOD BLANK	92%	U	10
X05620	MW-1 12-14	82%	U	13
X05621	MW-2 9 1/2-10 1/2	*	2300	120
X05622	MW-2 10 1/2-12	*	8800	130
X05623	MW-4 13 1/2-15	86%	19	11
X05624	MW-4 12-13 1/2	*	5300	130
X05625	MW-5 13-14 1/2	87%	U	13

OTP Soil Surrogate % Recovery limits: 60% - 118%

* = Diluted out.

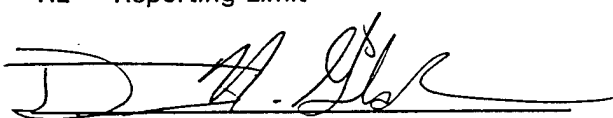
QUALIFIERS

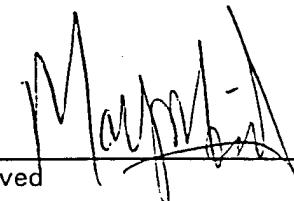
U = TEH analyzed for but not detected.

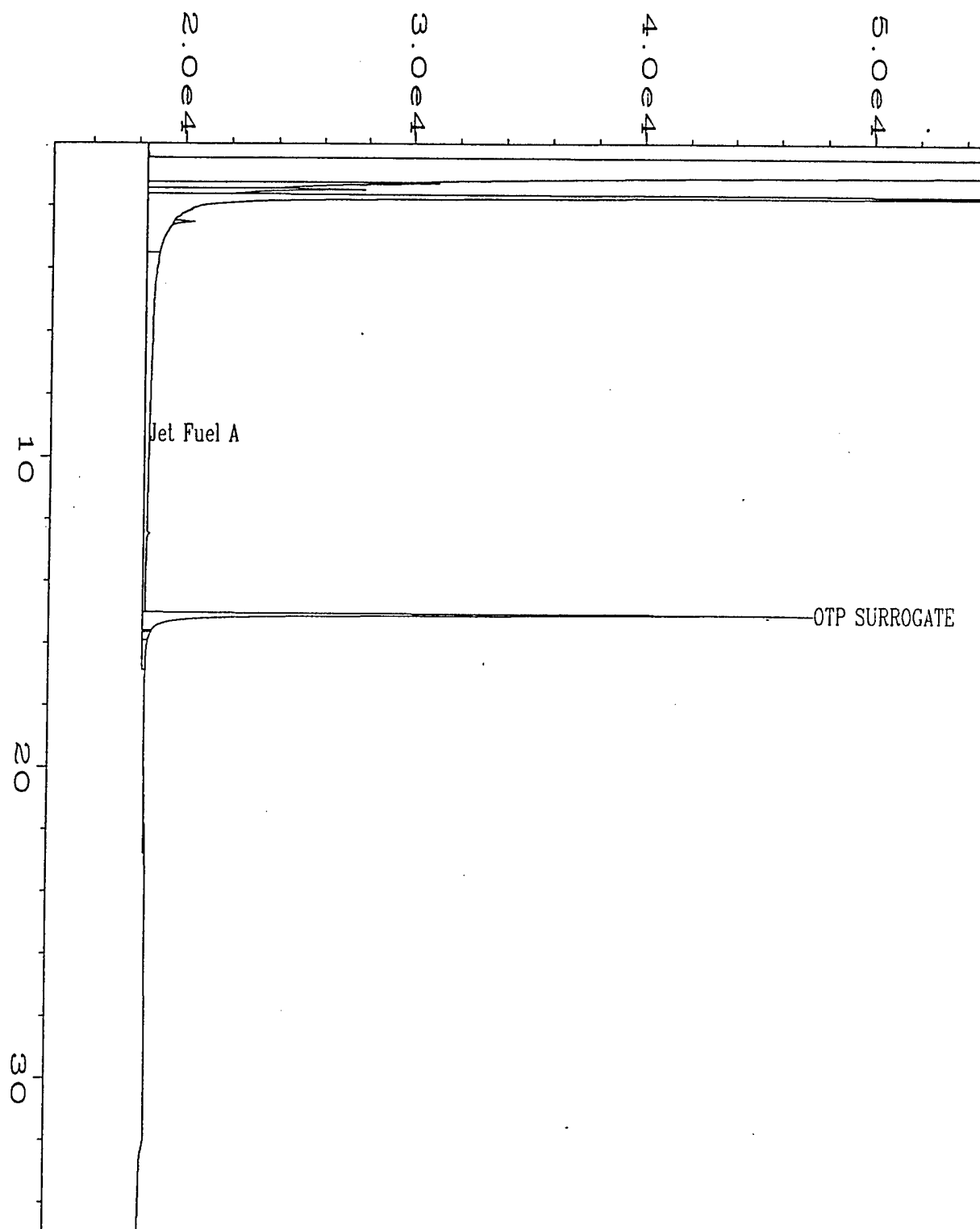
B = TEH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

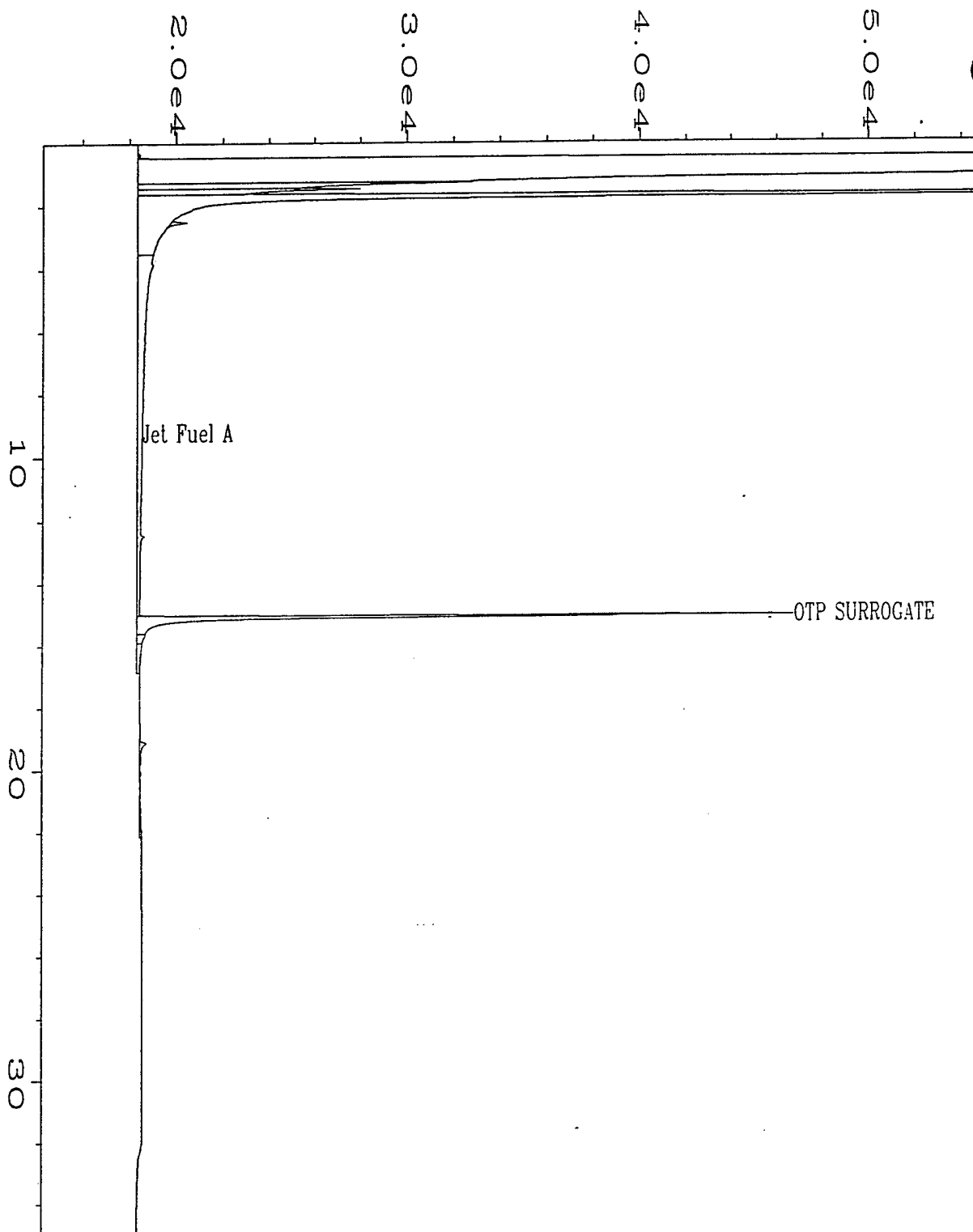
RL = Reporting Limit


Analyst

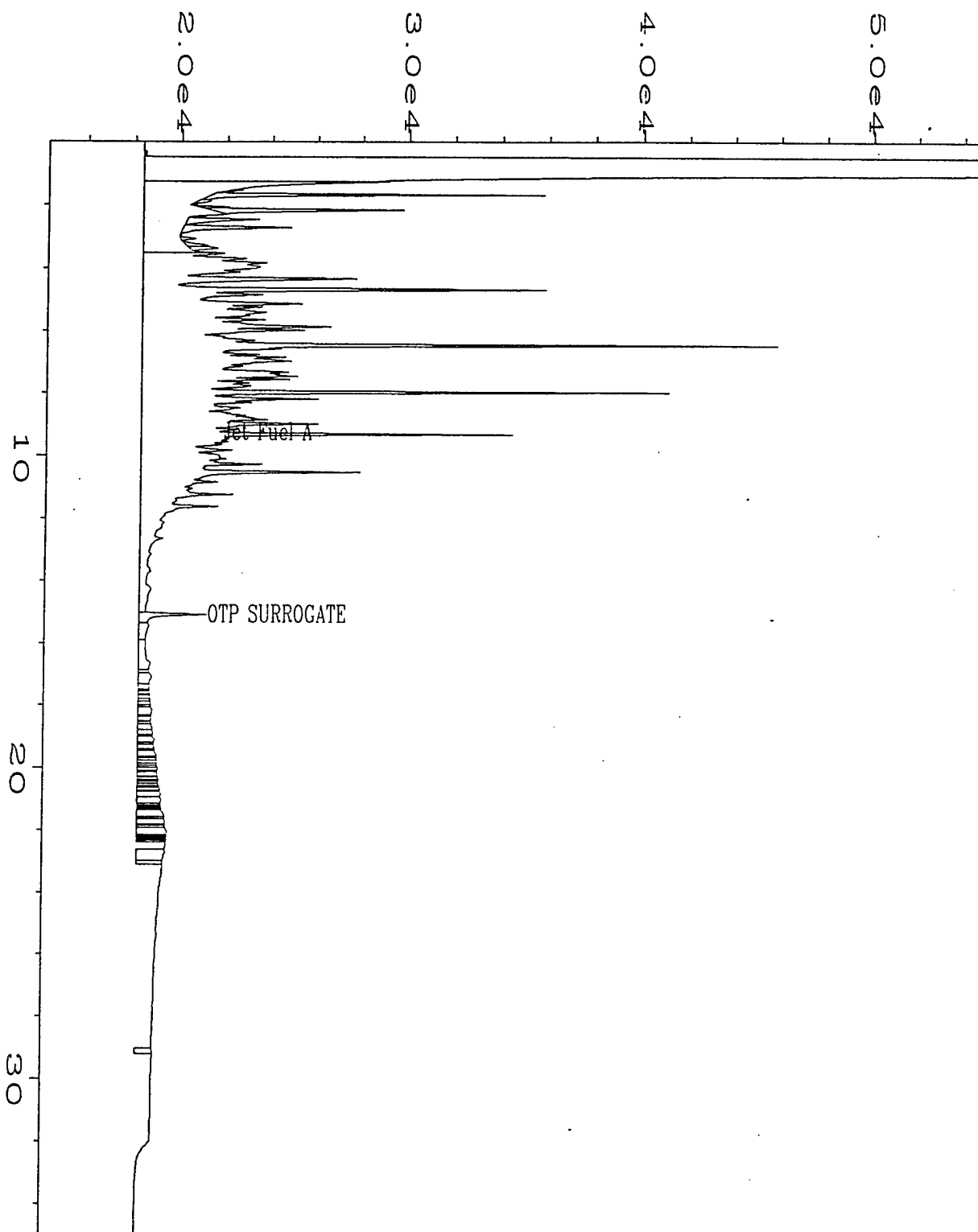

Approved



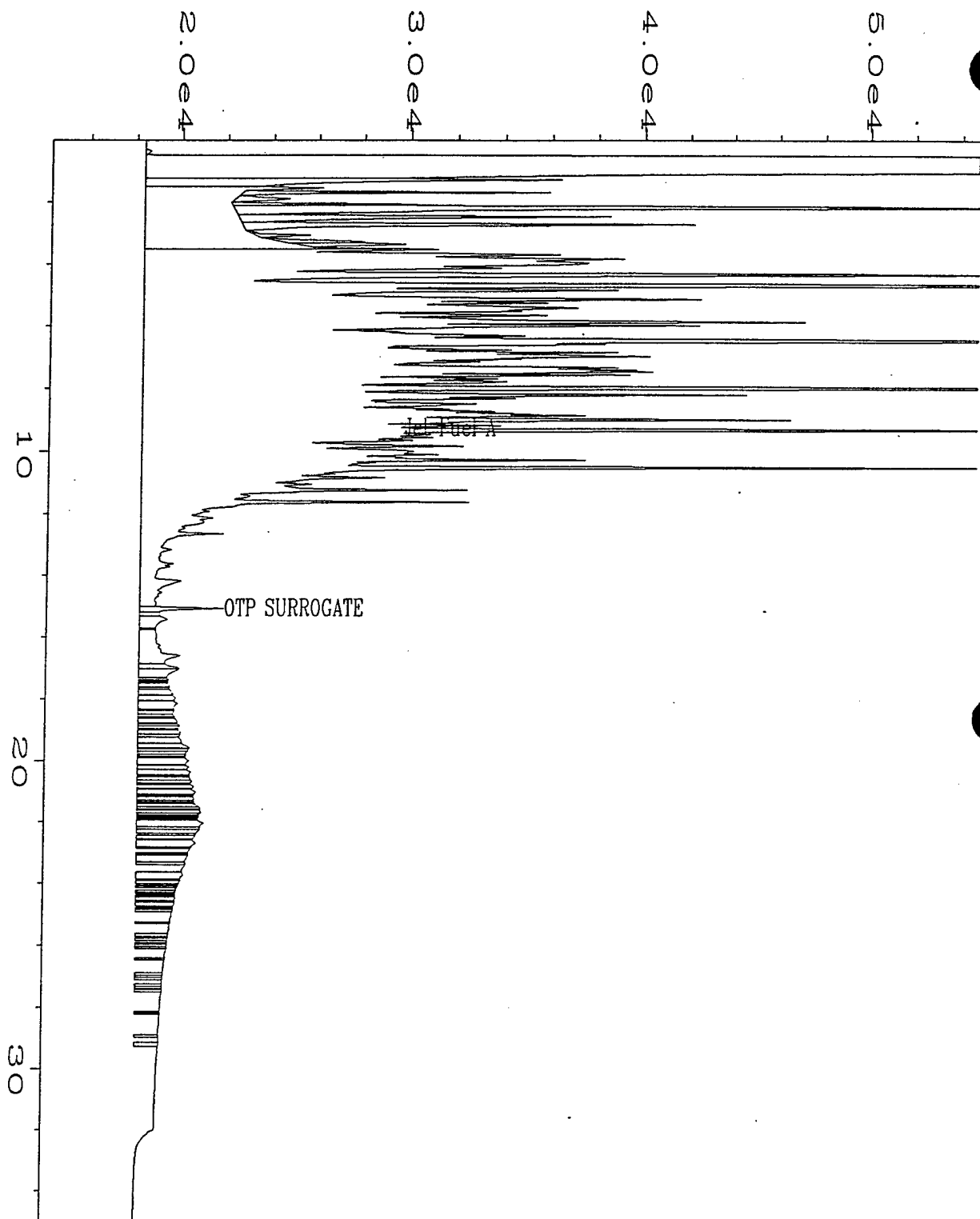
Data File Name	: C:\HPCHEM\2\DATA\JET0418\012R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 12
Instrument	: TEH	Injection Number	: 1
Sample Name	: SB041395	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 18 Apr 95 07:16 PM	Analysis Method	: JET0418.MTH
Report Created on	: 19 Apr 95 10:15 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		



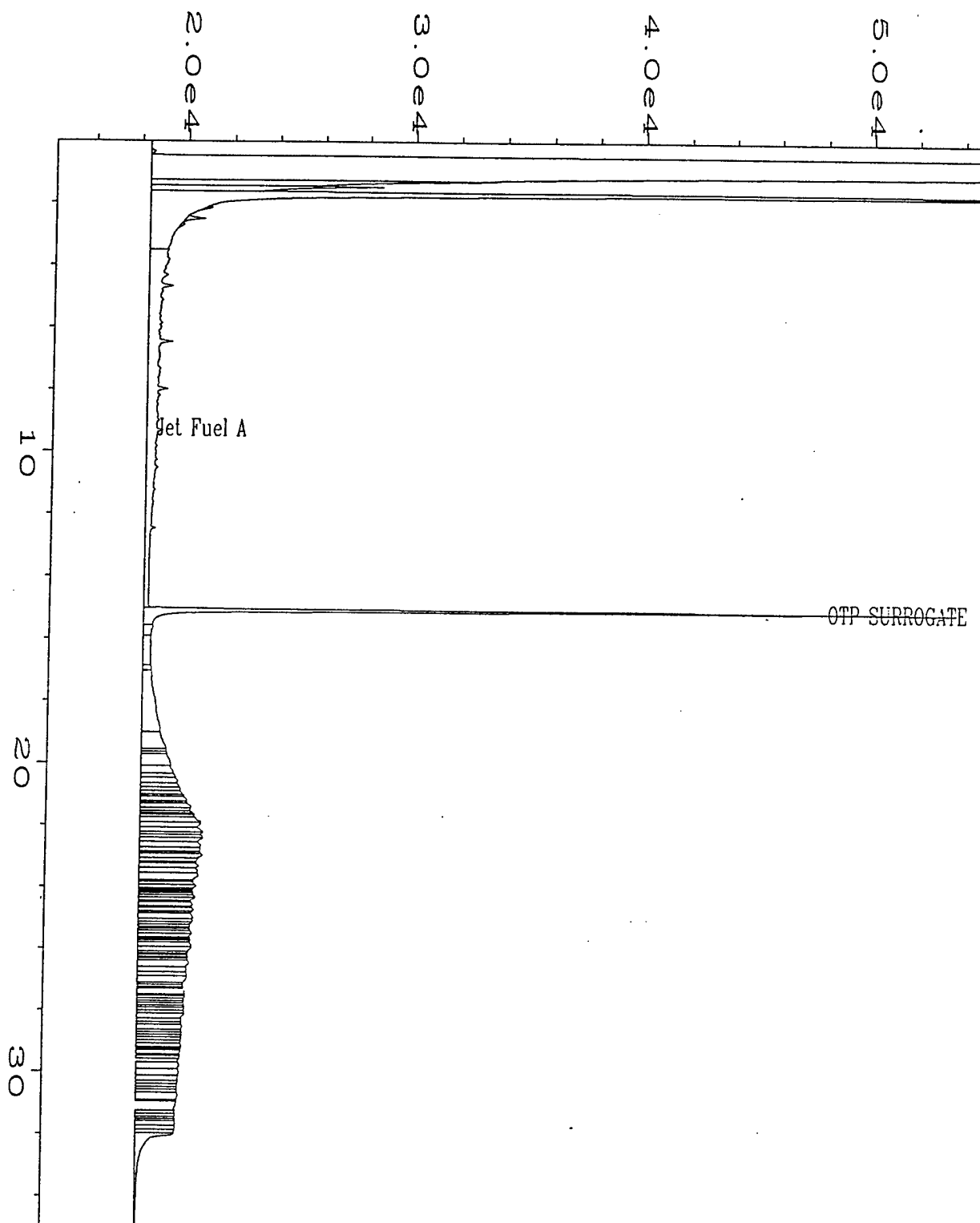
Data File Name	: C:\HPCHEM\2\DATA\JET0418\013R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 13
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05620 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BA M
Acquired on	: 18 Apr 95 08:02 PM	Analysis Method	: JET0418.MT
Report Created on:	: 19 Apr 95 10:15 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1182 CLIENT # MW-1 12-14 SOIL		



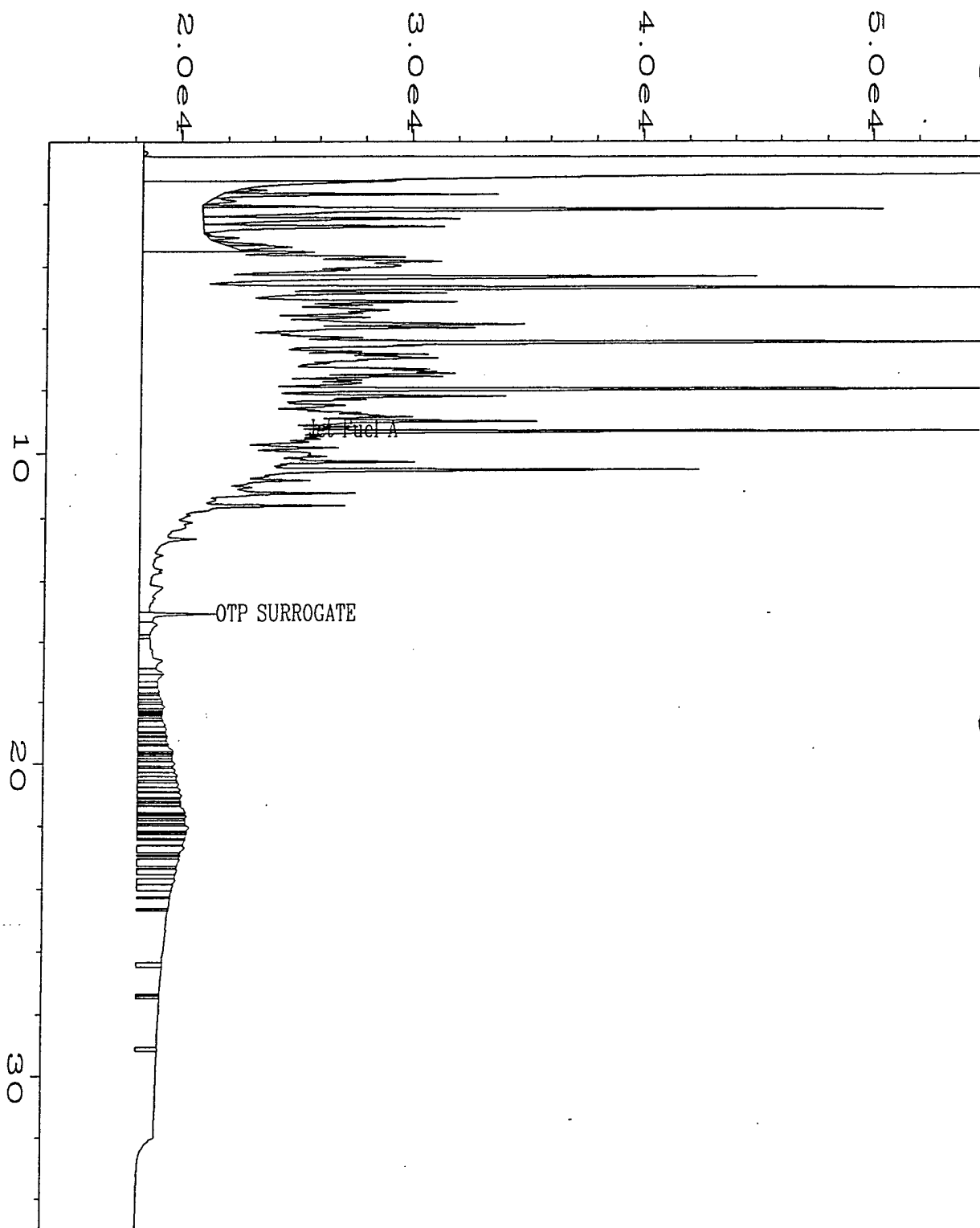
Data File Name	: C:\HPCHEM\2\DATA\JET0418\036R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 36
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05621 DF=10	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 19 Apr 95 02:44 PM	Analysis Method	: JET0418.MTH
Report Created on:	: 20 Apr 95 09:24 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 10		
Sample Info	: PROJECT # 95-1182 CLIENT # MW-2 9 1/2-10 1/2 SOIL		



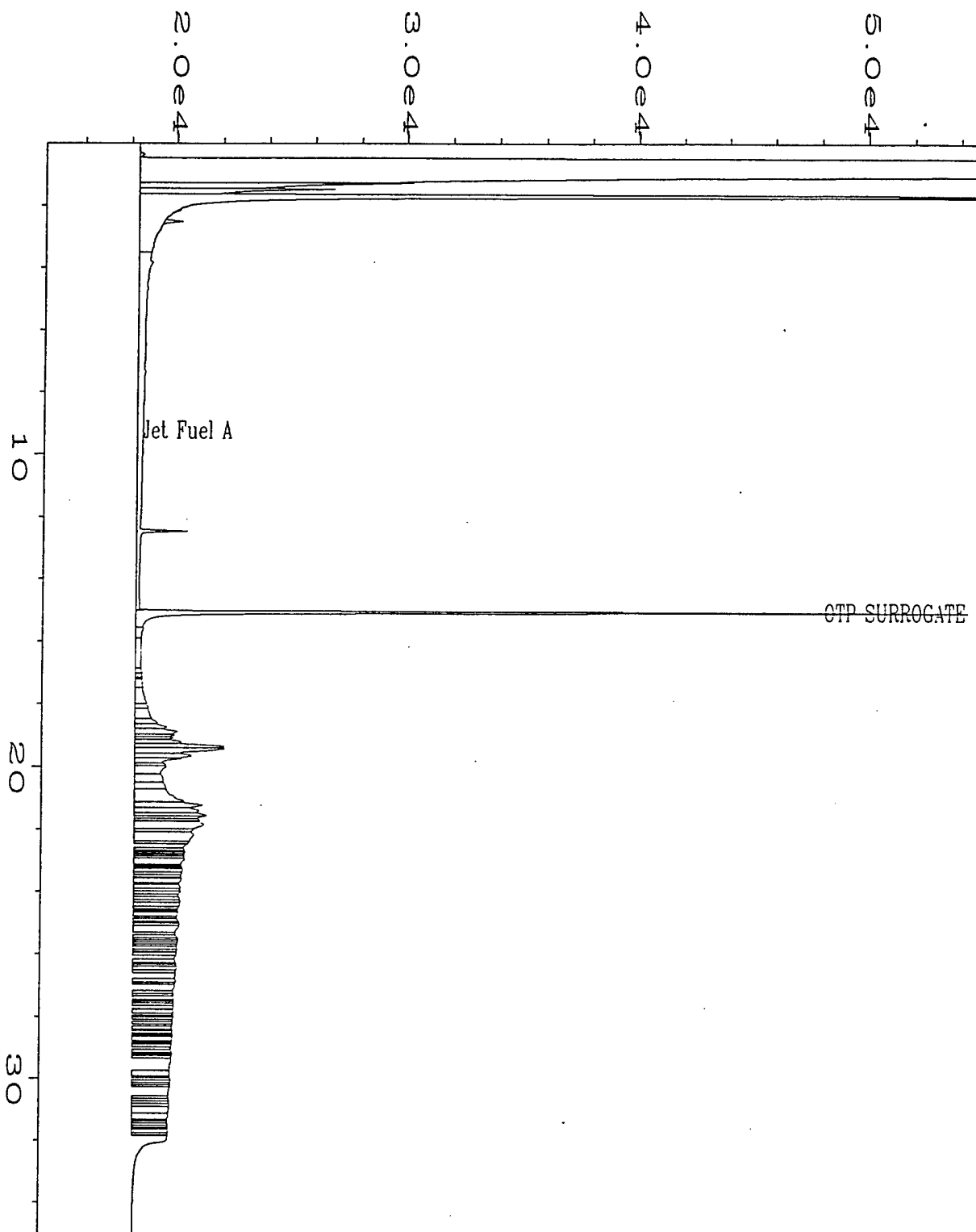
Data File Name	: C:\HPCHEM\2\DATA\JET0418\037R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 37
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05622 DF=10	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1BAS.M
Acquired on	: 19 Apr 95 03:31 PM	Analysis Method	: JET0418.MT
Report Created on:	20 Apr 95 09:24 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 10		
Sample Info	: PROJECT # 95-1182 CLIENT # MW-2 10 1/2-12 SOIL		



Data File Name	: C:\HPCHEM\2\DATA\JET0418\016R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 16
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05623 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 18 Apr 95 10:21 PM	Analysis Method	: JET0418.MTH
Report Created on:	: 19 Apr 95 10:16 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1182 CLIENT # MW-4 13 1/2-15 SOIL		



Data File Name	: C:\HPCHEM\2\DATA\JET0418\038R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 38
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05624 DF=10	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1BA M
Acquired on	: 19 Apr 95 04:17 PM	Analysis Method	: JET0418.MT
Report Created on:	20 Apr 95 09:24 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 10		
Sample Info	: PROJECT # 95-1182 CLIENT # MW-4 12-13 1/2 SOIL		



Data File Name	: C:\HPCHEM\2\DATA\JET0418\018R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 18
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05625 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 18 Apr 95 11:53 PM	Analysis Method	: JET0418.MTH
Report Created on	: 19 Apr 95 10:16 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1182 CLIENT # MW-5 13-14 1/2 SOIL		

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NON-CLP ANALYSIS RESULTS

Date: 05/01/95
Lab Name: Huffman Labs
Contact: Sue Zeller
Sample Matrix: soil

Client: Evergreen Analytical
Contact: Patty McClellan
Huffman Lab #: 160795

Client Smp#	Lab ID #	Element/Compound	Dilution Factor	Results	Units	Prep Date	Analysis Date	Sample Size (g)	Method #	Instrument ID
MW1(12-14)BLS	16079501	TC	NA	0.05	%	NA	04/27/95	0.374	Leco CR12	#7
MW1(12-14)BLS	16079501	TC	NA	0.07	%	NA	04/27/95	0.325	Leco CR12	#7
MW5(13-14.5)	16079502	TC	NA	<0.05	%	NA	04/27/95	0.503	Leco CR12	#7
MW6(16-16.5)	16079503	TC	NA	0.31	%	NA	04/27/95	0.540	Leco CR12	#7
MW10(10-11)	16079504	TC	NA	0.09	%	NA	04/27/95	0.358	Leco CR12	#7
MW11(11.5-13.5)	16079505	TC	NA	<0.05	%	NA	04/27/95	0.341	Leco CR12	#7
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.208	COU-02	tower
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.380	COU-02	tower
MW5(13-14.5)	16079502	CC	NA	<0.02	%	NA	04/27/95	0.158	COU-02	tower
MW6(16-16.5)	16079503	CC	NA	<0.02	%	NA	04/27/95	0.120	COU-02	tower
MW10(10-11)	16079504	CC	NA	<0.02	%	NA	04/27/95	0.237	COU-02	tower
MW11(11.5-13.5)	16079505	CC	NA	<0.02	%	NA	04/27/95	0.125	COU-02	tower
		% moisture			adjusted result					
182	MW1(12-14)BLS	16079501 20.44	TOC	NA	0.05 0.06 %	NA	NA	NA	by calc	NA
	MW1(12-14)BLS	16079501 20.44	TOC	NA	0.07 0.09 %	NA	NA	NA	by calc	NA
	MW5(13-14.5)	16079502 22.72	TOC	NA	<0.05 0.06 %	NA	NA	NA	by calc	NA
	MW6(16-16.5)	16079503	TOC	NA	0.31 %	NA	NA	NA	by calc	NA
1217	MW10(10-11)	16079504	TOC	NA	0.09 %	NA	NA	NA	by calc	NA
	MW11(11.5-13.5)	16079505	TOC	NA	<0.05 %	NA	NA	NA	by calc	NA

Samples analyzed and results reported on as as received basis.

Soil samples are not homogeneous.

As per client instructions, analytical aliquot taken from end of core tube.

Analytical aliquot is not thought to be representative of the entire sample.

Values reported below Detection Limits are for reference only.

TC detection limit = 0.05 %

CC detection limit = 0.02 %

TOC detection limit = 0.05 %

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NON-CLP ANALYSIS RESULTS LABORATORY CONTROL STANDARD

Date: 05/01/95
Lab Name: Huffman Labs
Contact: Sue Zeller

Client: Evergreen Analytical
Contact: Patty McClellan
Huffman Lab #: 160795

LABORATORY CONTROL STANDARD

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
LCS	BN 4851	TC	3.35	3.39	101	%	04/27/95	Leco CR12	#7
LCS	BN 4056	CC	11.33	11.34	100	%	04/27/95	COU-02	tower
LCS	BN 4056	CC	11.33	11.46	101	%	04/28/95	COU-02	tower

SPIKE RECOVERY

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
SPIKE	BN 4712	TC	12600	12482	99	ug C	04/27/95	Leco CR12	#7
SPIKE DUP	BN 4712	TC	12120	12076	100	ug C	04/27/95	Leco CR12	#7
SPIKE	BN 4712	CC	525	529	101	ug C	04/28/95	COU-02	tower
SPIKE DUP	BN 4712	CC	737	729	99	ug C	04/28/95	COU-02	tower

PD = Prep date

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NON-CLP QA/QC ANALYSIS RESULTS INITIAL AND CONTINUING CALIBRATION VERIFICATION

Date: 05/01/95 Client: Evergreen Analytical
Lab Name: Huffman Labs Contact: Patty McClellan
Contact: Sue Zeller Huffman Lab #: 160795

INITIAL CALIBRATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
ICS	BN 4712	TC	12.00	11.91	99	%	04/27/95	Leco CR12	#7
ICS	BN 4712	CC	12.00	11.95	100	%	04/27/95	COU-02	tower
ICS	BN 4712	CC	12.00	12.04	100	%	04/28/95	COU-02	tower

Slope = NA

Intercept = NA

95% Correlation Coefficient = NA

Single point calibrations for this test.

CONTINUING CALIBRATION VERIFICATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
CCS	BN 4712	TC	12.00	11.98	100	%	04/27/95	Leco CR12	#7
CCS	BN 4712	TC	12.00	11.94	100	%	04/27/95	Leco CR12	#7
CCS	BN 4712	CC	12.00	12.11	101	%	04/27/95	COU-02	tower
CCS	BN 4712	CC	12.00	12.17	101	%	04/28/95	COU-02	tower

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ANALYSIS : TOTAL CARBON

METHOD : HIGH TEMP
COMB. - INFRARED DET.

INSTRUMENT : LECO CR12

ANALYZER # 7

BALANCE # 19

D. CALCIUM CARBONATE

STD. N.I.S.T. BUFFALO RIVER SEDIMENT (BRS)

12.00 %C (theory)

BN 1/7/2

3.348 %C (theory)

BN 4851

SAMPLE #	SAMPLE WT G			% CARBON PRE-CALIB	% CARBON POST-CALIB	QC	% REC.
CaCO ₃	1170			11.81	11.91	ICS	99.3
CaCO ₃	1160	CaCO ₃	1100	11.84	11.98	CCS	
MB	1				100.5		
IB	1				100.5		
BRS	2520				3.388	LCS	101.2
1607-01	3740		Mixed 1607		105.0	Trace Qa dup	
1607-01	3250				106.7	amount Qc	14.5
1607-01	3340	CaCO ₃ spike			(3.797)		
1607-01	3080	CaCO ₃ spike			(3.981)		
1607-02	5030				103.6		
1607-04	3580				108.8		
1607-013	5400				103.1		
1607-05	3410				103.6		
CaCO ₃	1020				11.94	CCS	99.5

Anderson

DATE

4-27-95

REVIEWED

JL

DATE

4/28/95

PAGE

OF

2

7/27/93

ANALYSIS	CARBONATE CARBON	METHOD	SOP COU-02
ANALYZER #	6	COULOMETER #	
BALANCE #	10		3

CALCIUM CARBONATE (STD # 333) CaCO ₃	BOTTLE # 4712	% C THEORY = 12.00%	SODIUM CARBONATE Na ₂ CO ₃	BOTTLE # 2730	% C THEORY = 11.3
--	------------------	---------------------	---	------------------	-------------------

SAMPLE NO.	TARE WT. GRAMS	TARE + SAMPLE WT.	SAMPLE WT. GRAMS	NOTES	COUNTS μ GRAMS	LESS BLANK 8	% CARBON AS CARBONATE CARBON	QC	% RECOVERY
BL					6.8			IB	
BL					8.6			MB	
BL					8.5			MB	
N ₂ CO ₂	0.850016	0.856541	0.006525		748.0 738.6	740.0	11.34	ICS	100.09
CaCO ₃	0.863424	0.868667	0.005243		633.6	625.6	11.95	LCS	99.6
160701	0.941366	1.149121	0.207755	(NH)	8.0	0	0		0
160701	0.898693	1.278806	0.380113	3 Spurts Acid 3 Spurts Clock (NH)	6.0/11.7 11.1/11.7	3.1	0.000051		~0
160702	0.875199			Propped Bnt (NH)					
160703	0.912632	1.070765	0.157933	(NH)	8.9	.9	0.0000056		~0
160704	0.886964	1.007451	0.120487	(NH)	7.9	0	0		~0
160705	0.876686	1.114147	0.237461	(NH)	9.1	1.1	0.0000046		~0
160706	0.838101	0.963910	0.125809	(NH)	7.8	0	0		~0
CaCO ₃	0.847686	0.853324	0.005638		690.9	682.9	12.11	CCS	100.9

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Evergreen Analytical Sample Log Sheet

Project # 95-1217

Date(s) Sampled: 04/12,13/95 COC

Date Due: 4/19-UST,4/28-OTHERS

Date Received: 04/14/95 1130

Holding Time(s): 04/26,27-UST

Client Project I.D. 722450.26020/SEYMORE JOHNSON AFB Rush STANDARD

Client: Parsons Engineering Science, Inc.

Shipping Charges \$5.00

Address: 1700 BROADWAY ,SUITE 900

E.A. Cooler # CLIENT

DENVER, CO. 80290

Airbill # UPS

Contact: TODD WIEDEMEIER

Custody Seal Intact? N/A

Client P.O. _____

Cooler _____ Bottles _____

COC Present

Y

Sample Tags Present?

Y

Phone #831-8100 Fax 831-8208

Sample Tags Listed? Y

Sample(s) Sealed? Y

Special Invoicing/Billing _____

Special Instructions *SAMPLES NEED BTEX SPLIT. BTEX-TMB, TMB CHLOROBENZENES.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X05753	MW-6 15-16'	* BTEX,TVH,TEH,ALK. (%MOISTURE)	S	TUBE	A7
X05757	MW-10 10-11'	*TOC,BTEX,TVH,TEH,ALK. (%MOISTURE)	S	TUBE	A7/OUT
X05758	MW-10 11-12'	MS/MSD BTEX, (%MOISTURE)	S	TUBE	A7
X05754	MW-6 16-16.5	TOC, (%MOISTURE)	S	TUBE	A7/OUT
X05755	MW-8 11-12'	* BTEX,TVH,TEH, (%MOISTURE)	S	TUBE	A7
X05756	MW-9 15-16'	* BTEX,TVH,TEH, (%MOISTURE)	S	TUBE	A7
X05759A/B	MW-11 11.5-13.5	TOC,BTEX,TVH, (%MOISTURE)	S	2WM	#2/OUT
X05760A/B	SS-1 11.5-13.5	BTEX	S	2WM	#2
X05760E/F	SS-1 11.5-13.5 DUP	BTEX	S	2WM	#2
X05762A/B	SS-1 16'-18'	BTEX	S	2WM	#2
X05763A/B	SS-2 11.5-13.5	BTEX	S	2WM	#2
X05764A/B	SS-3 9-11	BTEX	S	2WM	#2
X05764E/F	SS-3 9-11 DUP	BTEX	S	2WM	#2
X05760C	SS-1 11.5-13.5	TVH	S	2WM	#2
X05760G	SS-1 11.5-13.5 DUP	TVH	S	2WM	#2
X05762C	SS-1 16'-18'	TVH	S	2WM	#2

R=Sample to be returned

Route GC/MS _____ GC 3 Metals _____ Wet Chem 1 SxPrep 1 Acctg 1

SxRec C QA/QC C Sales C File Orig

4/18/95

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X05763C	SS-2 11.5-13.5	TVH	S	2WM	#2
X05764C	SS-3 9-11	TVH	S	2WM	#2
X05764G	SS-3 9-11 DUP	TVH	S	2WM	#2
X05760D	SS-1 11.5-13.5	TEH, (%MOISTURE)	S	2WM	A7
X05760H	SS-1 11.5-13.5 DUP	TEH, (%MOISTURE)	S	2WM	A7
X05762D	SS-1 16'-18'	TEH, (%MOISTURE)	S	2WM	A7
X05763D	SS-2 11.5-13.5	TEH, (%MOISTURE)	S	2WM	A7
X05764D	SS-3 9-11	TEH, (%MOISTURE)	S	2WM	A7
X05764H	SS-3 9-11 DUP	TEH, (%MOISTURE)	S	2WM	A7
X05759	MW-11 11 1/2-13 1/2	TEH, (%MOISTURE)	S	2WM	A7

Page 2 of 2 Pages

Project # 95-1217

R=Sample to be returned

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Parsons ES
ADDRESS 401 Harrison Ave. Suite 210
CITY Cary STATE NC ZIP 27513
PHONE# (919) 677-0080 FAX (919) 677-0119

CLIENT CONTACT (print) _____
PROJECT I.D. 722450-26020
EAL QUOTE # _____ P.O.# _____

TURNAROUND REQUIRED* _____
*expedited turnaround subject to additional fee

Sampler Name: Richard
(signature) Richard
(print) Richard C. Richardson

Evergreen Analytical Cooler No. _____
Cooler Received _____

Please PRINT

all information:

CLIENT SAMPLE IDENTIFICATION DATE SAMPLED TIME

MW-6	15-16'	4/12/95	0745
MW-6	16-16 1/2'	4/12/95	0800
MW-8	11-12'	4/12/95	1120
MW-9	15-16'	4/12/95	1430
MW-10	10-11'	4/12/95	1545
MW-10	11-12'	4/12/95	1600
MW-11	11 1/2-13 1/2'	4/13/95	0900
SS-1	11 1/2-13 1/2'	4/13/95	1000
SS-1 duplicate	11 1/2-13 1/2'	4/13/95	1000
SS-1	16'-18'	4/13/95	1140
HT:			
DD:			

Instructions: MW-10 11-12' BTEX MS/MSD

MATRIX		ANALYSIS REQUESTED																			EAL use only Do not write in shaded area																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
No. of Containers	Water-Drinking/Discharge/Ground (circle)	Soil / Solid	Oil / Sludge	TCLP VOA/BNA/Pest/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBE (circle)	TRPH 418.1/Oil & Grease 413.1 (circle)	TVPH 8015mod. (Gasoline)	TEPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Alkalinity	TDC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

tube

Date & Time Rec'd: 4/14/95 1150Shipped Via: UPSClient: PARSONS

(Airbill # if applicable)

Client Project ID(s): 722450. 26020EAL Project #(s): 95-1217EAL Cooler(s): Y(N)Cooler# clientIce packs (Y) N Y N Y N Y N Y NTemperature °C 4⁶

Y

N

N/A

1. Custody seal(s) present:
Seals on cooler intact
Seals on bottle intact
taped ✓ ✓ ✓
2. Chain of Custody present: ✓
3. Containers broken or leaking:
(Comment on COC if Y) ✓
4. Containers labeled: ✓
5. COC agrees w/ bottles received:
(Comment on COC if N) ✓
6. COC agrees w/ labels:
(Comment on COC if N) ✓
7. Headspace in VOA vials-waters only
(comment on COC if Y) ✓
8. VOA samples preserved: ✓
9. pH measured on metals, cyanide or phenolics*: ✓
List discrepancies _____
*Non-EAL provided containers only, water samples only.
10. Metal samples present: ✓
Total _____, Dissolved _____
D or PD to be filtered: _____
T, TR, D, PD to be Preserved: _____
11. Short holding times: ✓
Specify parameters _____
12. Multi-phase sample(s) present: ✓
13. COC signed w/ date/time: ✓

Comments: Chain of custody and labels on sample tubes do not agree. Samples in tubes are not homogeneous. pm 4/14/95

(Additional comments on back)

Custodian Signature/Date: Lee (ORRICK) 4/14/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number : MB042095
Date Extracted/Prepared : 4/20/95
Date Analyzed : 4/20/95
% Moisture : NA

Client Project No. : 722450.26020/Seymore
Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX1042009

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
T Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene): 101% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

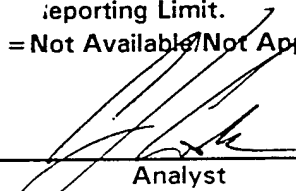
U = Compound analyzed for, but not detected.

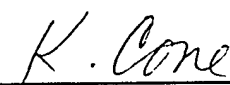
B = Compound also found in the blank.

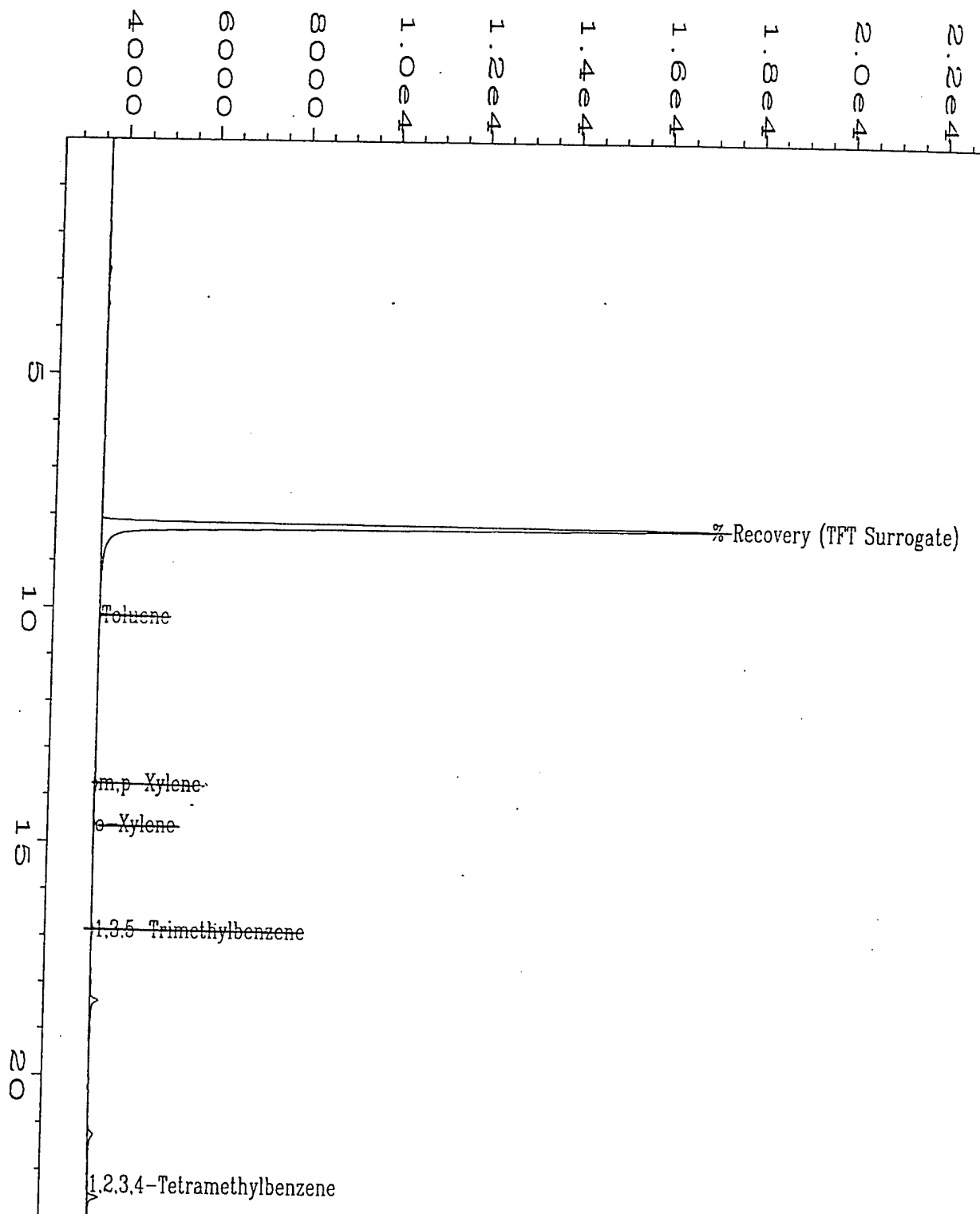
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



File Name	: C:\HPCHEM\1\DATA\BX10420\009F0701.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 9
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: MB042095	Sequence Line	: 7
Bar Code:		Instrument Method	: BX10420.MTH
Acquired on	: 20 Apr 95 02:35 PM	Analysis Method	: BX10420B.MTH
Report Created on	: 21 Apr 95 12:38 PM	Sample Amount	: 0
Recalibrated on	: 21 APR 95 12:15 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number : MB042295
Date Extracted/Prepared : 4/22/95
Date Analyzed : 4/22/95
% Moisture : NA

Client Project No. : 722450.26020/Seymore
Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2042211

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	0.4	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		101%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

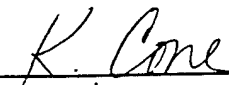
B = Compound also found in the blank.

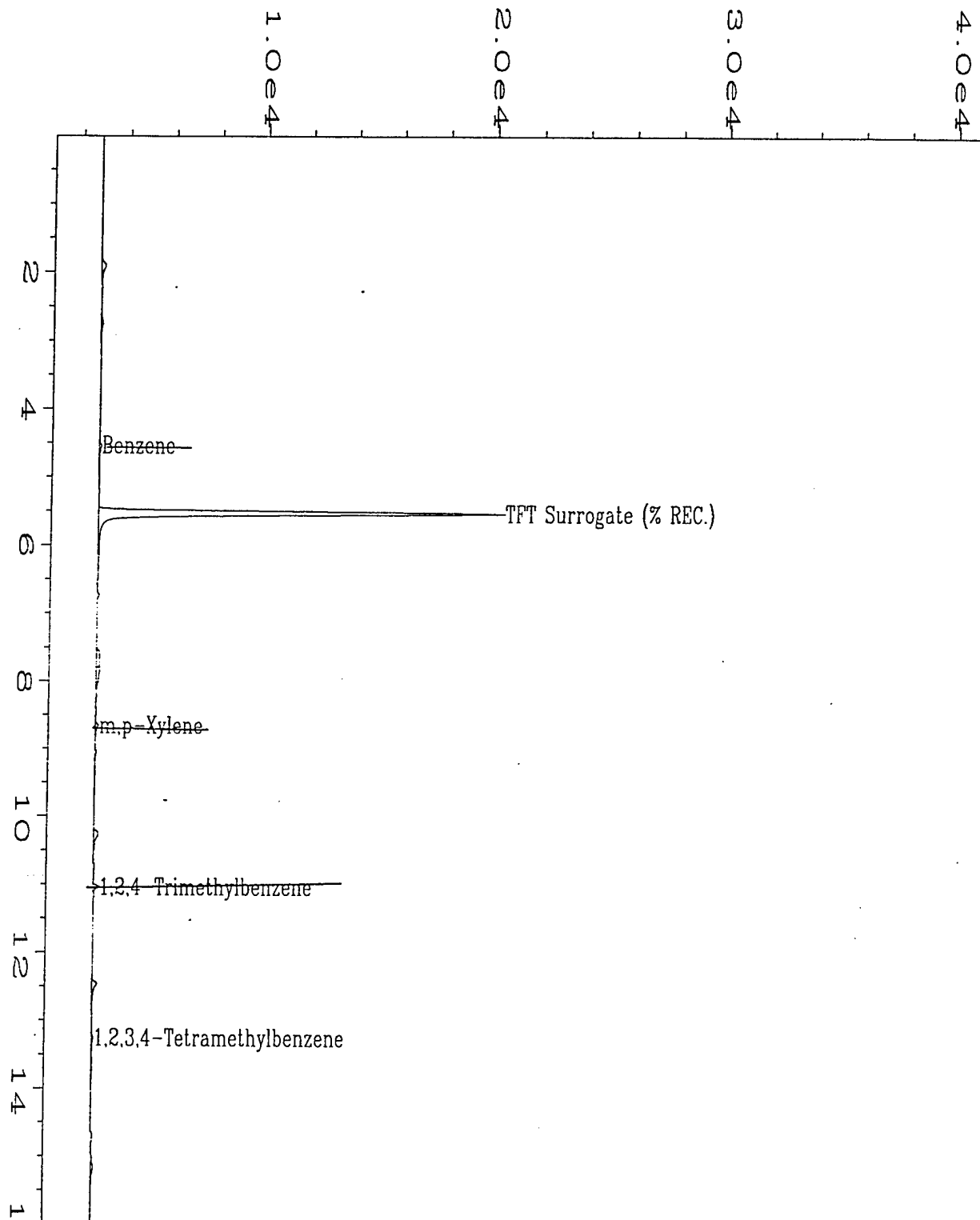
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

R. Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20422\011R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB042295	Sequence Line	: 10
Use Time Bar Code:		Instrument Method	: BX20422.MTH
Acquired on	: 22 Apr 95 03:54 PM	Analysis Method	: BX20422.MTH
Report Created on	: 24 Apr 95 06:40 PM	Sample Amount	: 0
Last Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number : MB042395
Date Extracted/Prepared : 4/23/95
Date Analyzed : 4/23/95
% Moisture : NA

Client Project No. : 722450.26020/Seymore
Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2042310

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
T Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.4	0.4
1,3,5-Trimethylbenzene	108-67-8	0.5	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	0.8	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		96%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

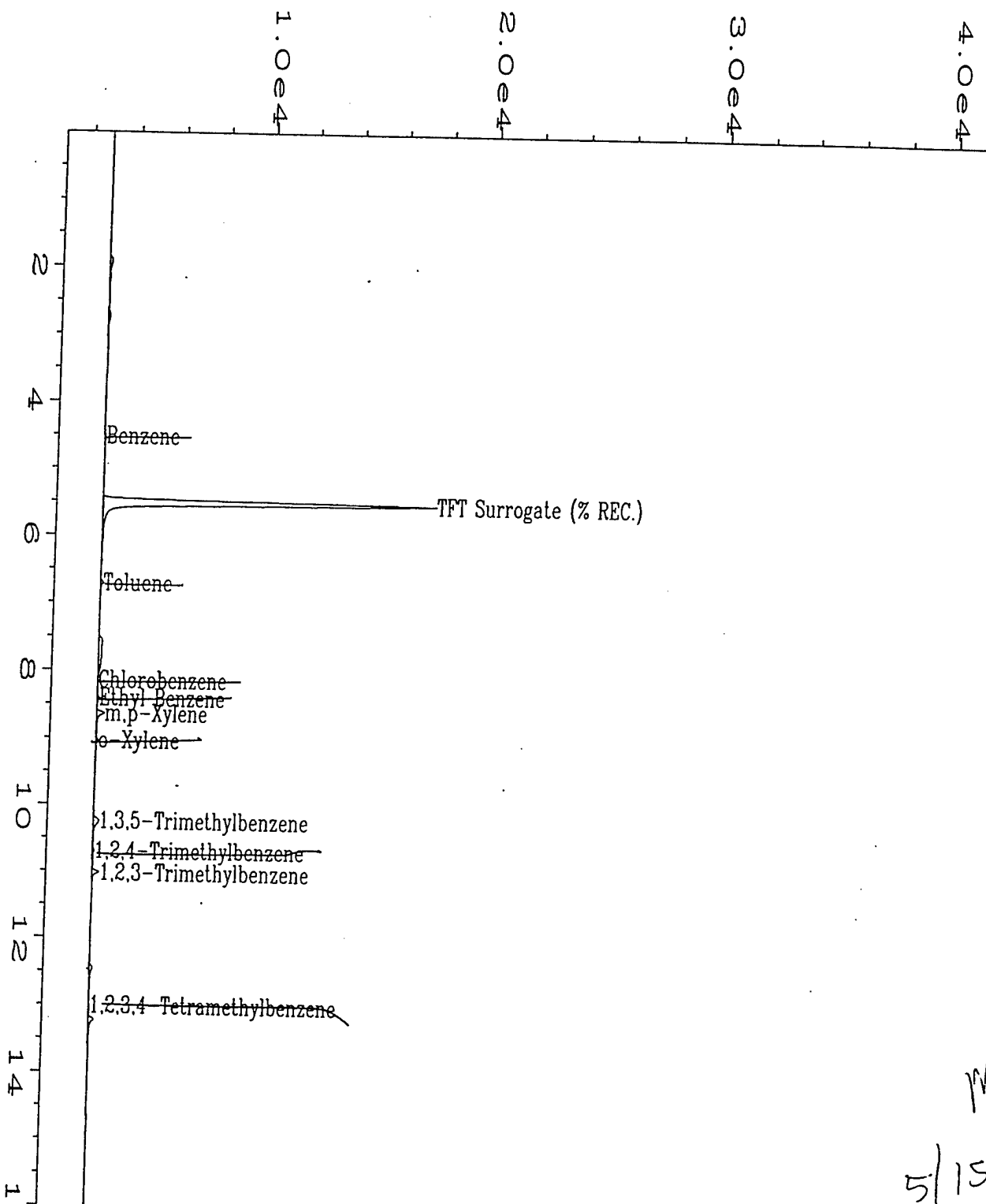
J = Indicates an estimated value when the compound is detected, but is below the Reporting
Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name : D:\2\DATA\BX20423\010R0901.D
 Operator : T.Lockwood
 Instrument : BTEX2
 Sample Name : MB042395
 Sample Bar Code:
 Acquired on : 23 Apr 95 02:14 PM
 Report Created on: 25 Apr 95 04:32 PM
 Last Recalib on : 25 Apr 95 04:27 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 10
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX20423.MTH
 Analysis Method : BX20423.MTH
 Sample Amount : 0
 ISTD Amount :

5/15/95
 [Signature]

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MEB042395	Client Project No.	: 722450.26020/Seymore Johnson AFB
Date Extracted/Prepared	: 4/23/95	Lab Project No.	: 95-1217
Date Analyzed	: 4/23/95	Dilution Factor	: 125.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water/MeOH
		Lab File No.	: BX2042311

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	500
Toluene	108-88-3	U	500
Chlorobenzene	108-90-7	U	500
Ethyl Benzene	100-41-4	U	500
T Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	500
1,3,5-Trimethylbenzene	108-67-8	U	500
1,2,4-Trimethylbenzene	95-63-6	U	500
1,2,3-Trimethylbenzene	526-73-8	U	500
1,2,3,4-Tetramethylbenzene	488-23-3	U	500

Surrogate Recovery (α,α,α -Trifluorotoluene):	105%	70%-130% (QC limits)
---	------	----------------------

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

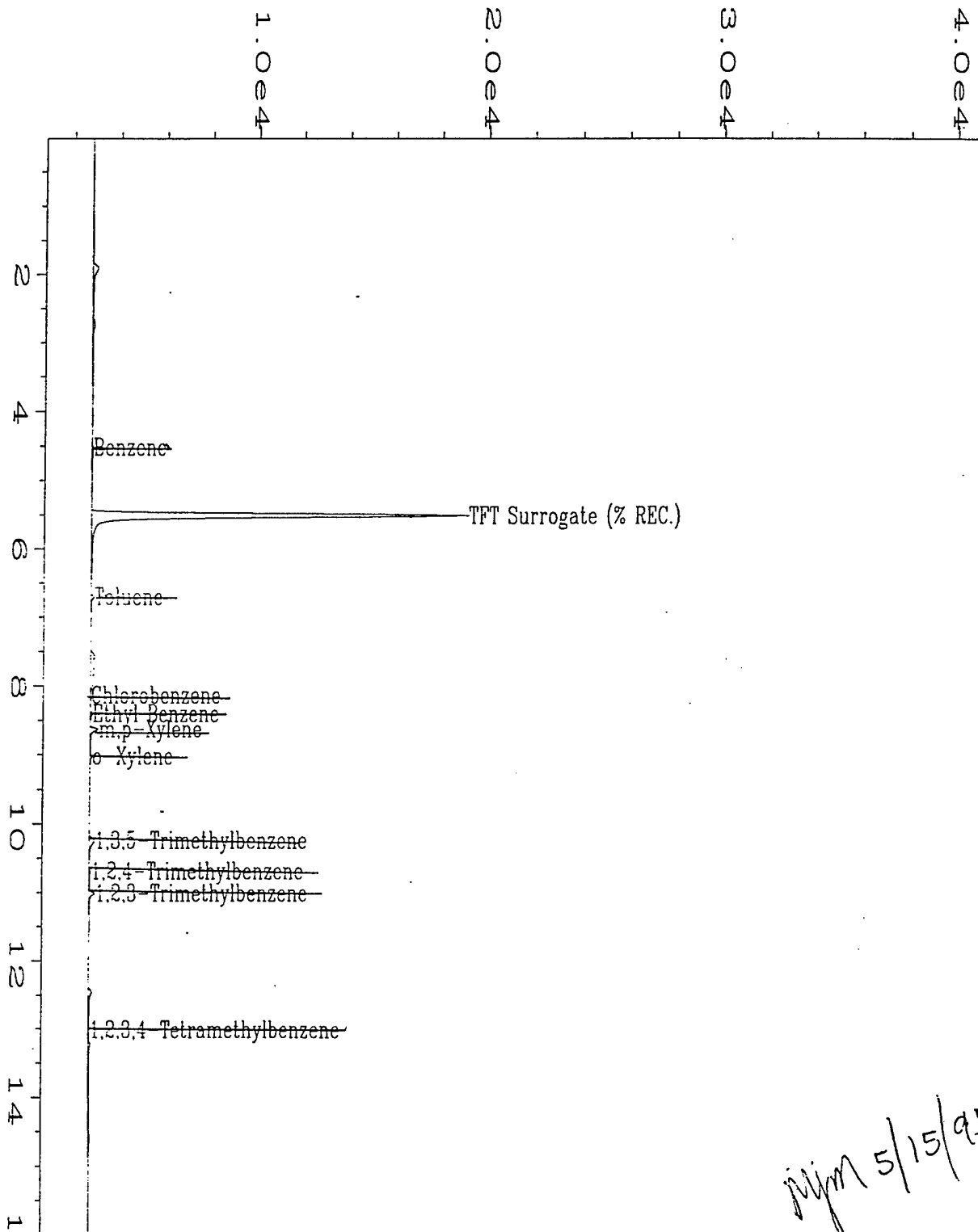
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



mjm 5/15/95

ata File Name	: C:\HPCHEM\2\DATA\BX20423\011R0901.D	Page Number	: 1
operator	: T.Lockwood	Vial Number	: 11
nstrument	: BTEX2	Injection Number	: 1
Sample Name	: MEB042395	Sequence Line	: 9
Sample Bar Code:		Instrument Method:	BX20423.MTH
Acquired on	: 23 Apr 95 02:50 PM	Analysis Method	: BX20423.MTH
Report Created on:	25 Apr 95 04:48 PM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 04:27 PM	ISTD Amount	:
Multiplier	: 125		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MB042595	Client Project No.	: 722450.26020/Seymore Johnson AFB
Date Extracted/Prepared	: 4/25/95	Lab Project No.	: 95-1217
Date Analyzed	: 4/25/95	Dilution Factor	: 1.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2042511

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
m, p & o Xylenes	108-38-3, 106-42-3 and 95-47-6	0.6	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	0.4	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	1.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		93%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

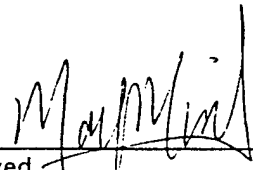
B = Compound also found in the blank.

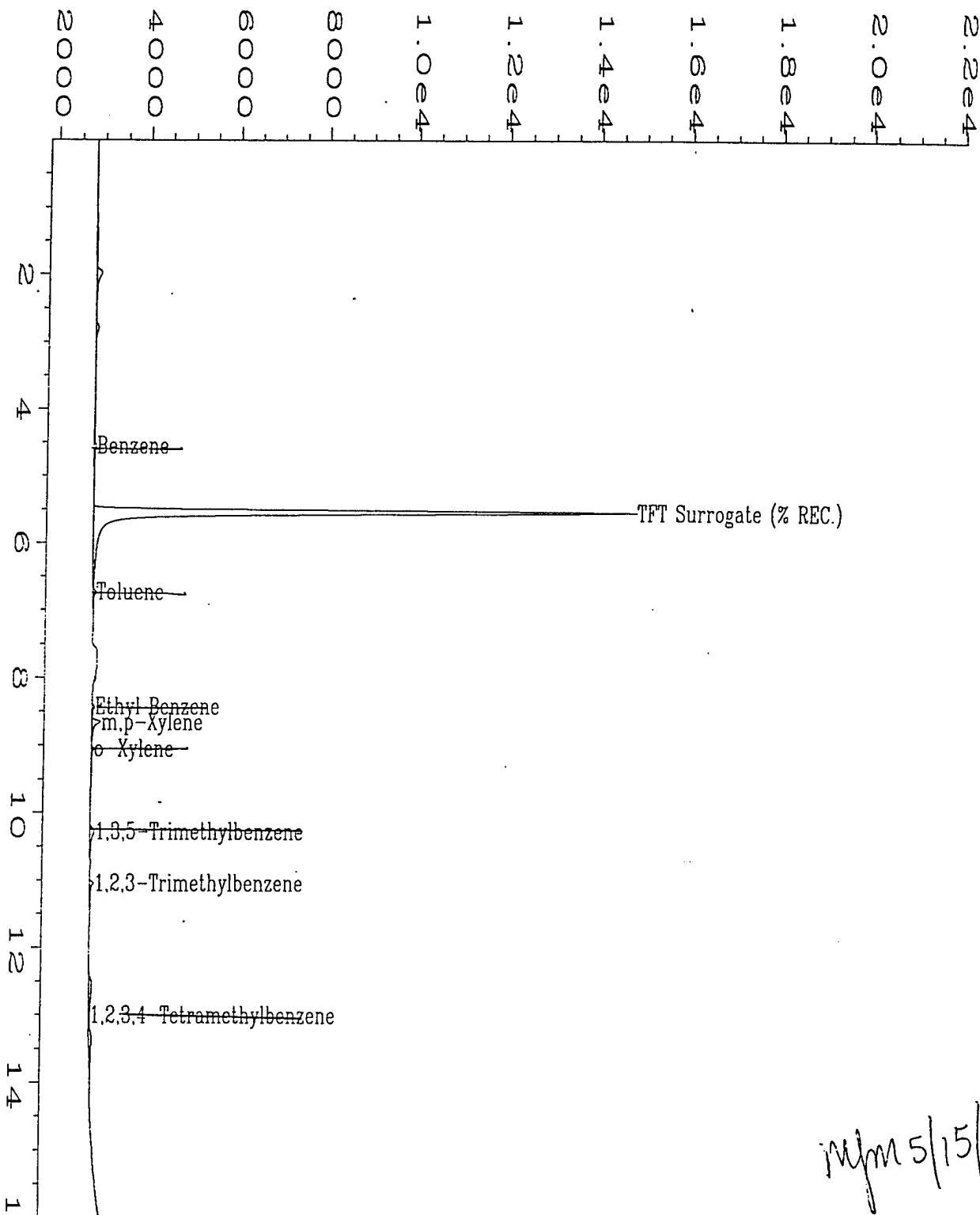
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

F = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



mjm 5/15/95

Data File Name	: C:\HPCHEM\2\DATA\BX20425\011R0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB042595	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20425.MTH
Acquired on	: 25 Apr 95 03:02 PM	Analysis Method	: BX20425.MTH
Report Created on	: 12 May 95 06:13 PM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 09:49 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number : MEB042595
Date Extracted/Prepared : 4/26/95
Date Analyzed : 4/26/95
% Moisture : NA

Client Project No. : 722450.26020/Seymore
Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 125.00
Method : 602/8020
Matrix : Water/MeOH
Lab File No. : BX2042621

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	500
Toluene	108-88-3	U	500
Chlorobenzene	108-90-7	U	500
Ethyl Benzene	100-41-4	U	500
Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	53 J	500
1,3,5-Trimethylbenzene	108-67-8	U	500
1,2,4-Trimethylbenzene	95-63-6	U	500
1,2,3-Trimethylbenzene	526-73-8	120 J	500
1,2,3,4-Tetramethylbenzene	488-23-3	U	500

Surrogate Recovery (α,α,α -Trifluorotoluene): 93% 70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.


U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

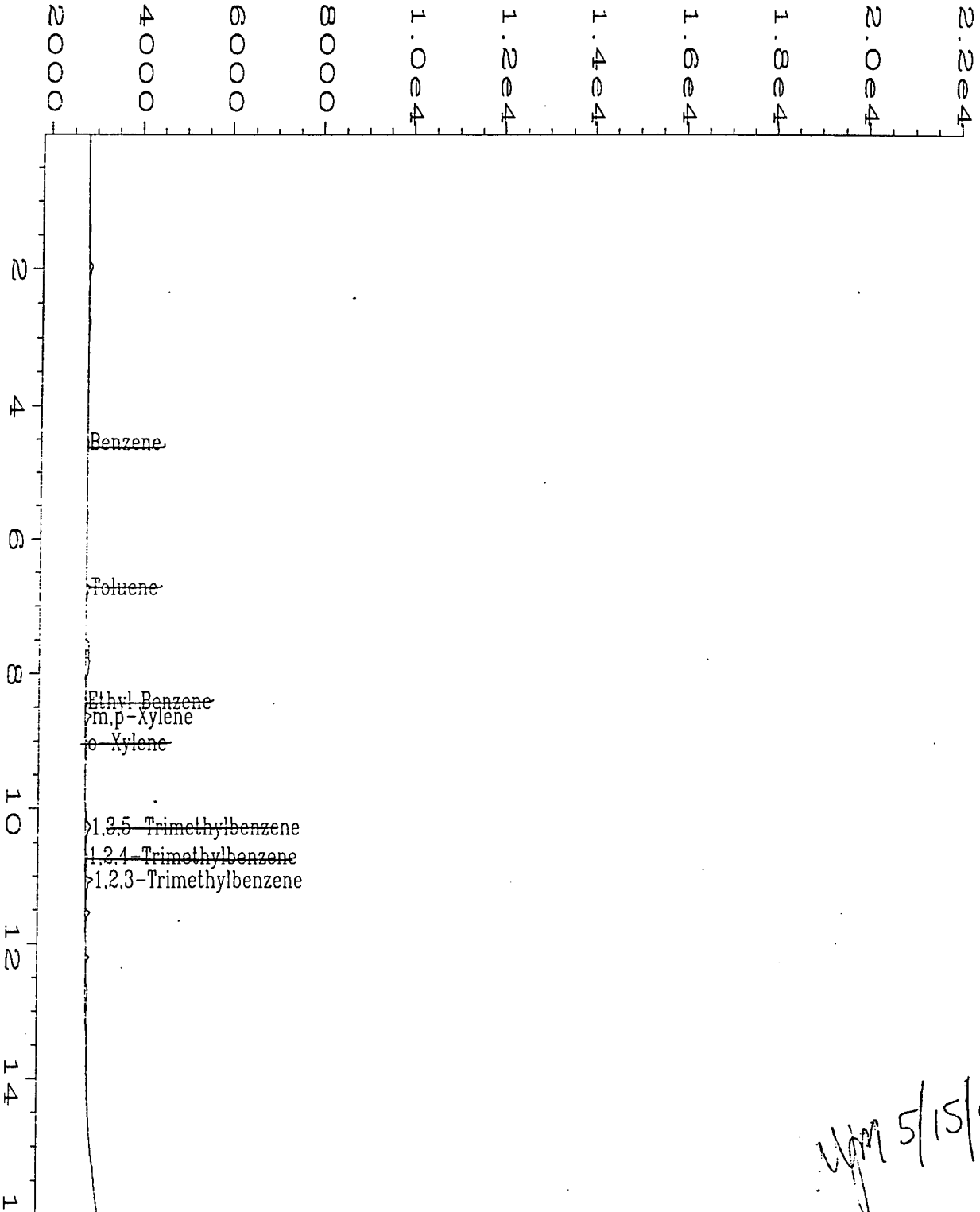
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

F = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Wm 5/15/95

Data File Name	: C:\HPCHEM\2\DATA\BX20425\018R0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 18
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MEB042595	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20425.MTH
Acquired on	: 25 Apr 95 07:34 PM	Analysis Method	: BX20425.MTH
Report Created on:	: 12 May 95 06:16 PM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 09:49 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number : MB042695
Date Extracted/Prepared : 4/26/95
Date Analyzed : 4/26/95
% Moisture : NA

Client Project No. : 722450.26020/Seymore
Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2042611

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.7	0.4
1,3,5-Trimethylbenzene	108-67-8	0.6	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	0.9	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		106%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.


U = Compound analyzed for, but not detected.

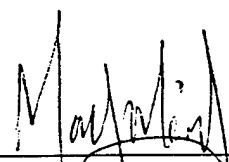
B = Compound also found in the blank.

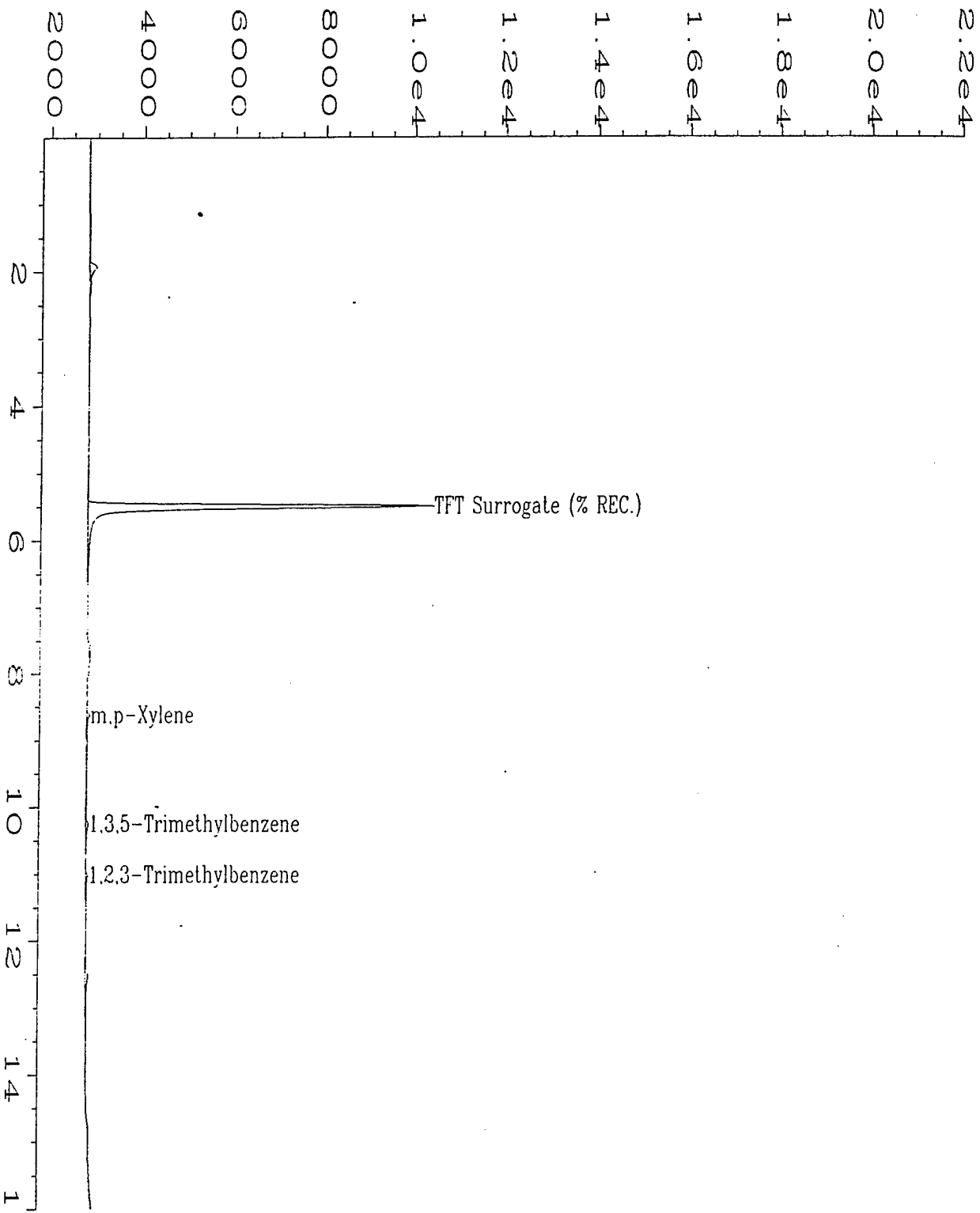
J = Indicates an estimated value when the compound is detected, but is below the Reporting
Limit (RL).

R = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name : D:\2\DATA\BX20426\011R1001.D
 Operator : S.W. Tyson
 Instrument. : BTEX2
 Sample Name : MB042695
 Run Time Bar Code:
 Acquired on : 26 Apr 95 03:19 PM
 Report Created on: 15 May 95 08:26 PM
 Last Recalib on : 26 APR 95 02:33 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 11
 Injection Number : 1
 Sequence Line : 10
 Instrument Method: BX20426.MTH
 Analysis Method : BX20426.MTH
 Sample Amount : 0
 ISTD Amount :

EVERGREEN ANALYTICAL, INC.
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(303) 425-80201

Method 8020 Data Report

Client Sample Number : MW-6 15-16'
Lab Sample Number : X05753
Date Sampled : 4/12/95
Date Received : 4/14/95
Date Extracted/Prepared : 4/22/95
Date Analyzed : 4/22/95
% Moisture : 25.33%

Client Project No. : 722450.26020/S [redacted] Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1.00
Method : 8020
Matrix : Soil
Lab File No. : BX2042214
Method Blank No. : MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	5.4
Toluene	108-88-3	U	5.4
Chlorobenzene	108-90-7	U	5.4
Ethyl Benzene	100-41-4	U	5.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	5.4
1,3,5-Trimethylbenzene	108-67-8	0.5 J	5.4
1,2,4-Trimethylbenzene	95-63-6	U	5.4
1,2,3-Trimethylbenzene	526-73-8	U	5.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	5.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		101%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

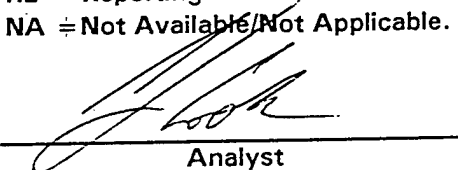
U = Compound analyzed for, but not detected.

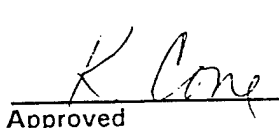
B = Compound also found in the blank.

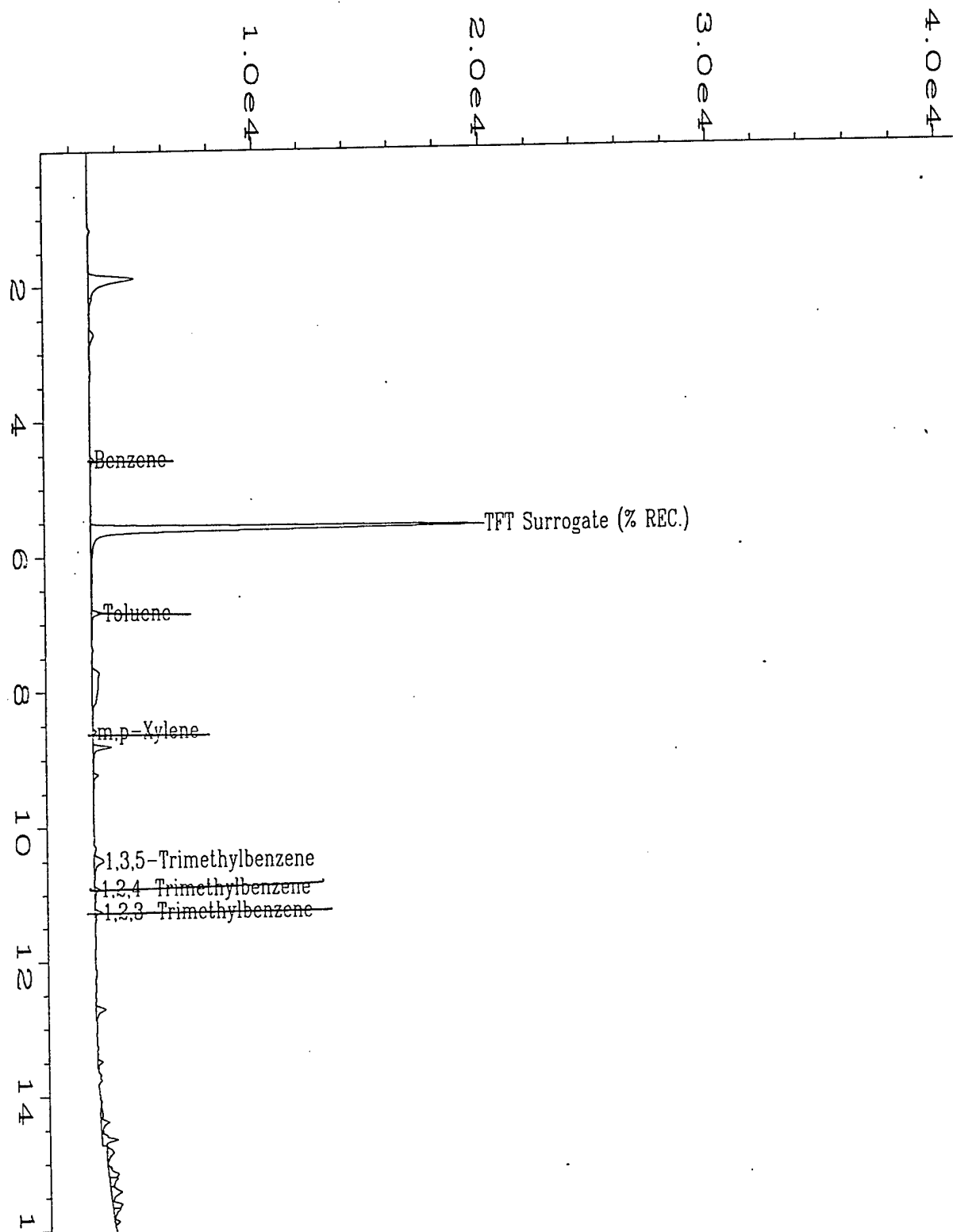
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20422\014R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05753;1;5	Sequence Line	: 10
Run Time Bar Code:		Instrument Method:	BX20422.MTH
Acquired on	: 22 Apr 95 06:18 PM	Analysis Method	: BX20422.MTH
Report Created on:	24 Apr 95 06:42 PM	Sample Amount	: 0
1st Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1217; MW-6 15-16';5 GRAMS SOIL		

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Method 8020 Data Report

Client Sample Number : MW-6 15-16'
Lab Sample Number : X05753DUP
Date Sampled : 4/12/95
Date Received : 4/14/95
Date Extracted/Prepared : 4/22/95
Date Analyzed : 4/22/95
% Moisture : 25.33%

Client Project No. : 722450.26020/3
Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1.00
Method : 8020
Matrix : Soil
Lab File No. : BX2042223
Method Blank No. : MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	5.4
Toluene	108-88-3	U	5.4
Chlorobenzene	108-90-7	U	5.4
Ethyl Benzene	100-41-4	U	5.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	5.4
1,3,5-Trimethylbenzene	108-67-8	U	5.4
1,2,4-Trimethylbenzene	95-63-6	U	5.4
1,2,3-Trimethylbenzene	526-73-8	U	5.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	5.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		91%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

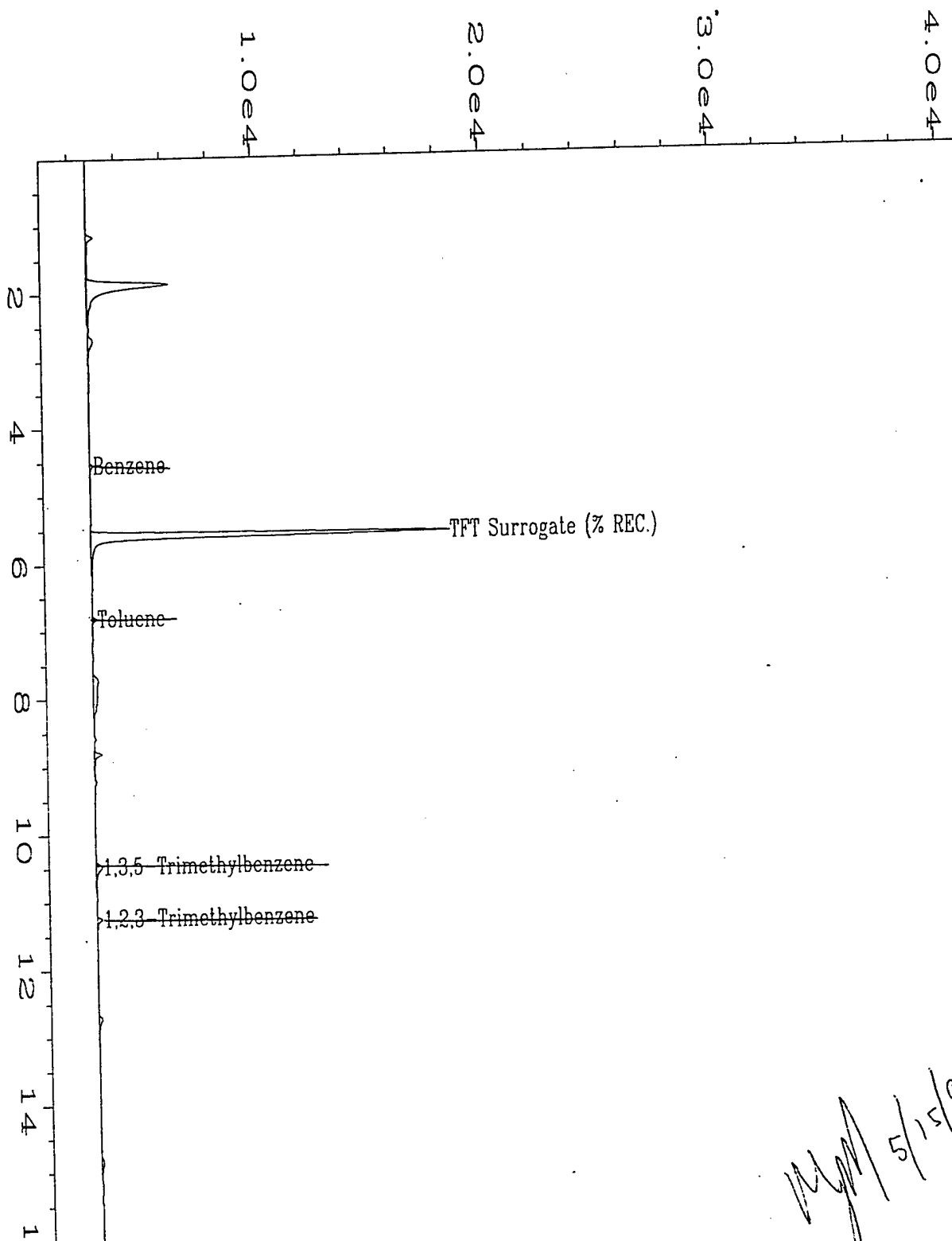
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20422\023R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 23
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05753DUP;1;5	Sequence Line	: 10
Run Time Bar Code:		Instrument Method:	BX20422.MTH
Acquired on	: 22 Apr 95 11:43 PM	Analysis Method	: BX20422.MTH
Report Created on	: 24 Apr 95 06:46 PM	Sample Amount	: 0
1st Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1217; MW-6 15-16'; 5 GRAMS SOIL		

Method 8020 Data Report

Client Sample Number	: MW-8 11-12'	Client Project No.	: 722450.26020/Johnson AFB
Lab Sample Number	: X05755	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/22/95	Lab File No.	: BX2042219
% Moisture	: 20.45%	Method Blank No.	: MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	5.0
Toluene	108-88-3	U	5.0
Chlorobenzene	108-90-7	U	5.0
Ethyl Benzene	100-41-4	U	5.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.7 J	5.0
1,3,5-Trimethylbenzene	108-67-8	U	5.0
1,2,4-Trimethylbenzene	95-63-6	U	5.0
1,2,3-Trimethylbenzene	526-73-8	U	5.0
1,2,3,4-Tetramethylbenzene	488-23-3	U	5.0

Surrogate Recovery (α,α,α -Trifluorotoluene): 91% 50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

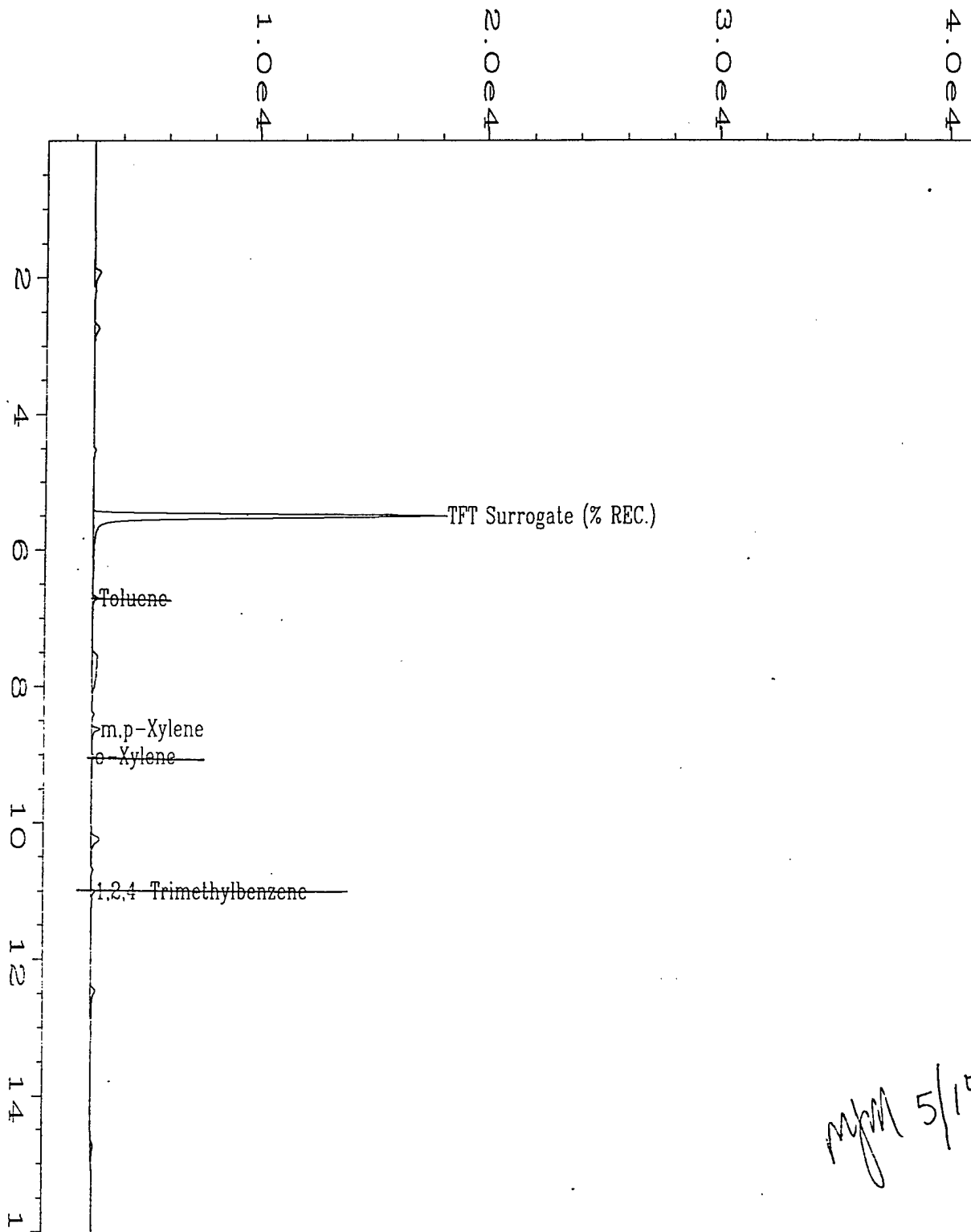
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

M. Magallon
Approved



mpm 5/15/95

Data File Name	: C:\HPCHEM\2\DATA\BX20422\019R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 19
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05755;1;5	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20422.MTH
Acquired on	: 22 Apr 95 09:18 PM	Analysis Method	: BX20422.MTH
Report Created on:	: 24 Apr 95 06:44 PM	Sample Amount	: 0
Test Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1217; MW-8 11-12'; 5 GRAMS SOIL		

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Method 8020 Data Report

Client Sample Number : MW-8 11-12'
Lab Sample Number : X05755DUP
Date Sampled : 4/12/95
Date Received : 4/14/95
Date Extracted/Prepared : 4/22/95
Date Analyzed : 4/22/95
% Moisture : 20.45%

Client Project No. : 722450.26020/S
Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1.00
Method : 8020
Matrix : Soil
Lab File No. : BX2042220
Method Blank No. : MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	5.0
Toluene	108-88-3	U	5.0
Chlorobenzene	108-90-7	U	5.0
Ethyl Benzene	100-41-4	U	5.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	5.0
1,3,5-Trimethylbenzene	108-67-8	U	5.0
1,2,4-Trimethylbenzene	95-63-6	U	5.0
1,2,3-Trimethylbenzene	526-73-8	U	5.0
1,2,3,4-Tetramethylbenzene	488-23-3	U	5.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		88%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

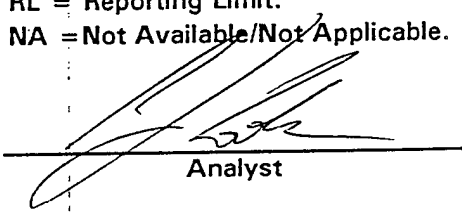
U = Compound analyzed for, but not detected.


B = Compound also found in the blank.

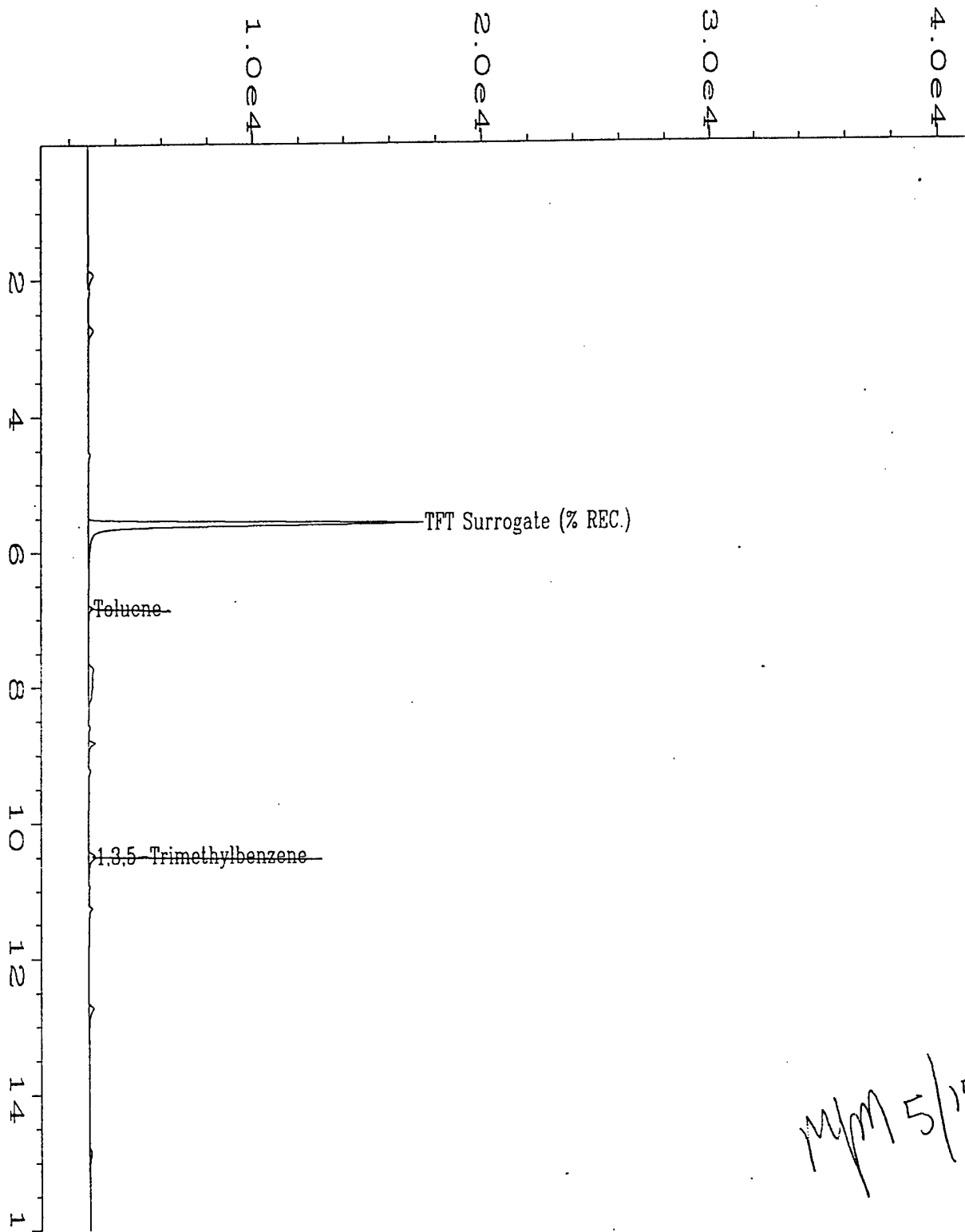
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20422\020R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 20
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05755DUP;1;5	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20422.MTH
Acquired on	: 22 Apr 95 09:55 PM	Analysis Method	: BX20422.MTH
Report Created on:	: 24 Apr 95 06:45 PM	Sample Amount	: 0
st Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1217; MW-8 11-12'; 5 GRAMS SOIL		

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Method 8020 Data Report

Client Sample Number : MW-9 15-16'
Lab Sample Number : X05756
Date Sampled : 4/12/95
Date Received : 4/14/95
Date Extracted/Prepared : 4/22/95
Date Analyzed : 4/23/95
% Moisture : 17.55%

Client Project No. : 722450.26020/5
Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1.00
Method : 8020
Matrix : Soil
Lab File No. : BX2042226
Method Blank No. : MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg		RL* ug/Kg
Benzene	71-43-2	0.8	J	4.9
Toluene	108-88-3		U	4.9
Chlorobenzene	108-90-7		U	4.9
Ethyl Benzene	100-41-4		U	4.9
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.7	J	4.9
1,3,5-Trimethylbenzene	108-67-8		U	4.9
1,2,4-Trimethylbenzene	95-63-6		U	4.9
1,2,3-Trimethylbenzene	526-73-8		U	4.9
1,2,3,4-Tetramethylbenzene	488-23-3	0.8	JB	4.9
Surrogate Recovery (α,α,α -Trifluorotoluene):		96%		50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

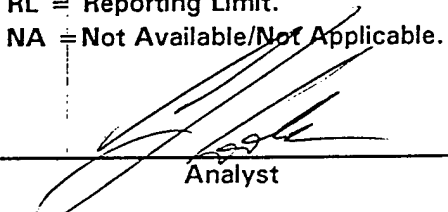
U = Compound analyzed for, but not detected.

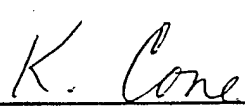
B = Compound also found in the blank.

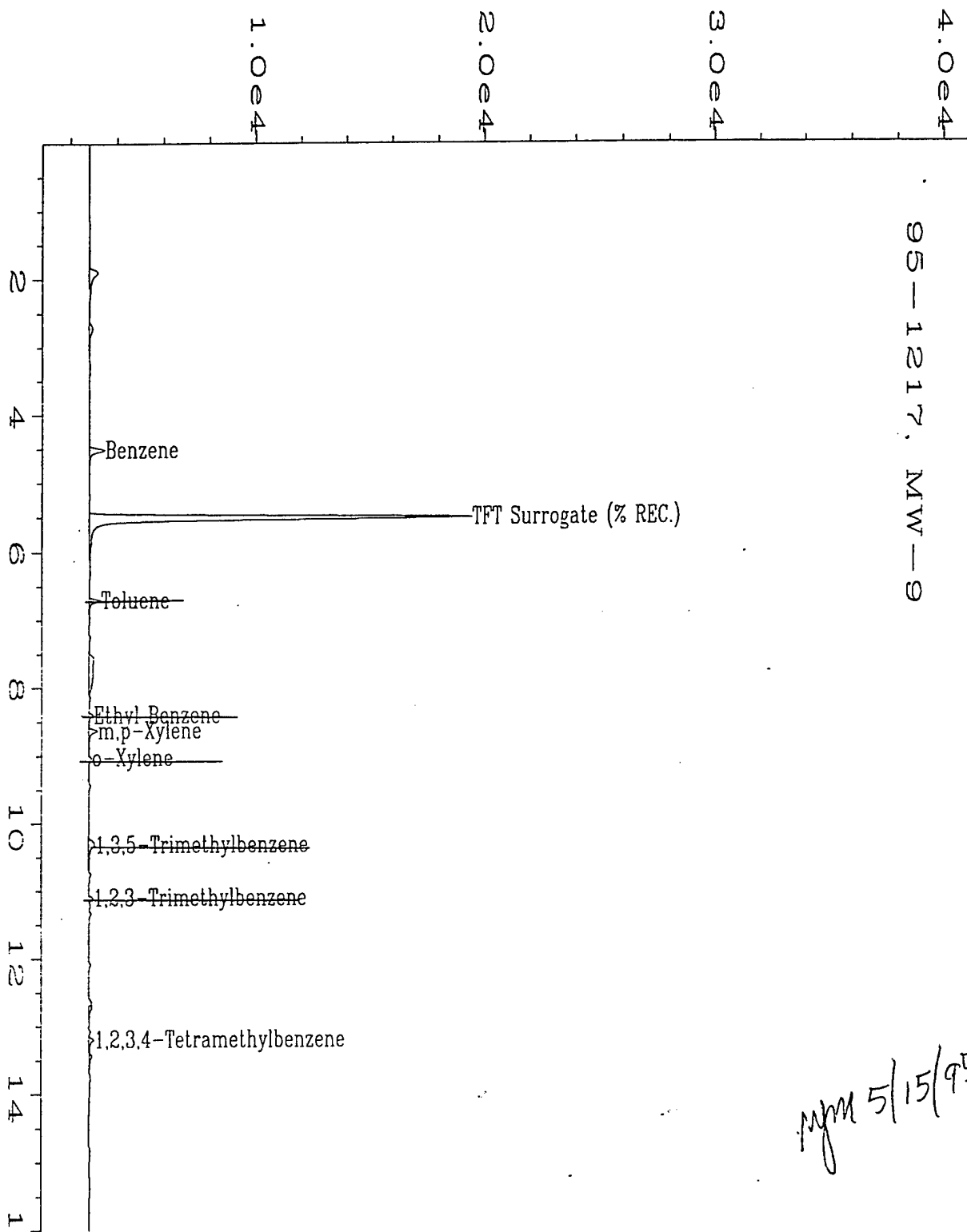
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



mpm 5/15/95

Data File Name	: C:\HPCHEM\2\DATA\BX20422\026R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 26
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05756;1;5	Sequence Line	: 10
Run Time Bar Code:		Instrument Method:	BX20422.MTH
Acquired on	: 23 Apr 95 01:31 AM	Analysis Method	: BX20422.MTH
Report Created on:	25 Apr 95 02:26 PM	Sample Amount	: 0
Int Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 1		

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Method 8020 Data Report

Client Sample Number	: MW-10 10-11'	Client Project No.	: 722450.2602
Lab Sample Number	: X05757	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/20/95	Matrix	: Soil
Date Analyzed	: 4/21/95	Lab File No.	: BX1042030
% Moisture	: 21.90%	Method Blank No.	: MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	5.1
Toluene	108-88-3	0.7 J	5.1
Chlorobenzene	108-90-7	U	5.1
Ethyl Benzene	100-41-4	U	5.1
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	1.6 J	5.1
1,3,5-Trimethylbenzene	108-67-8	0.5 J	5.1
1,2,4-Trimethylbenzene	95-63-6	0.5 J	5.1
1,2,3-Trimethylbenzene	526-73-8	U	5.1
1,2,3,4-Tetramethylbenzene	488-23-3	U	5.1
Surrogate Recovery (α,α,α -Trifluorotoluene):		72%	50%-150% (QC limit)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

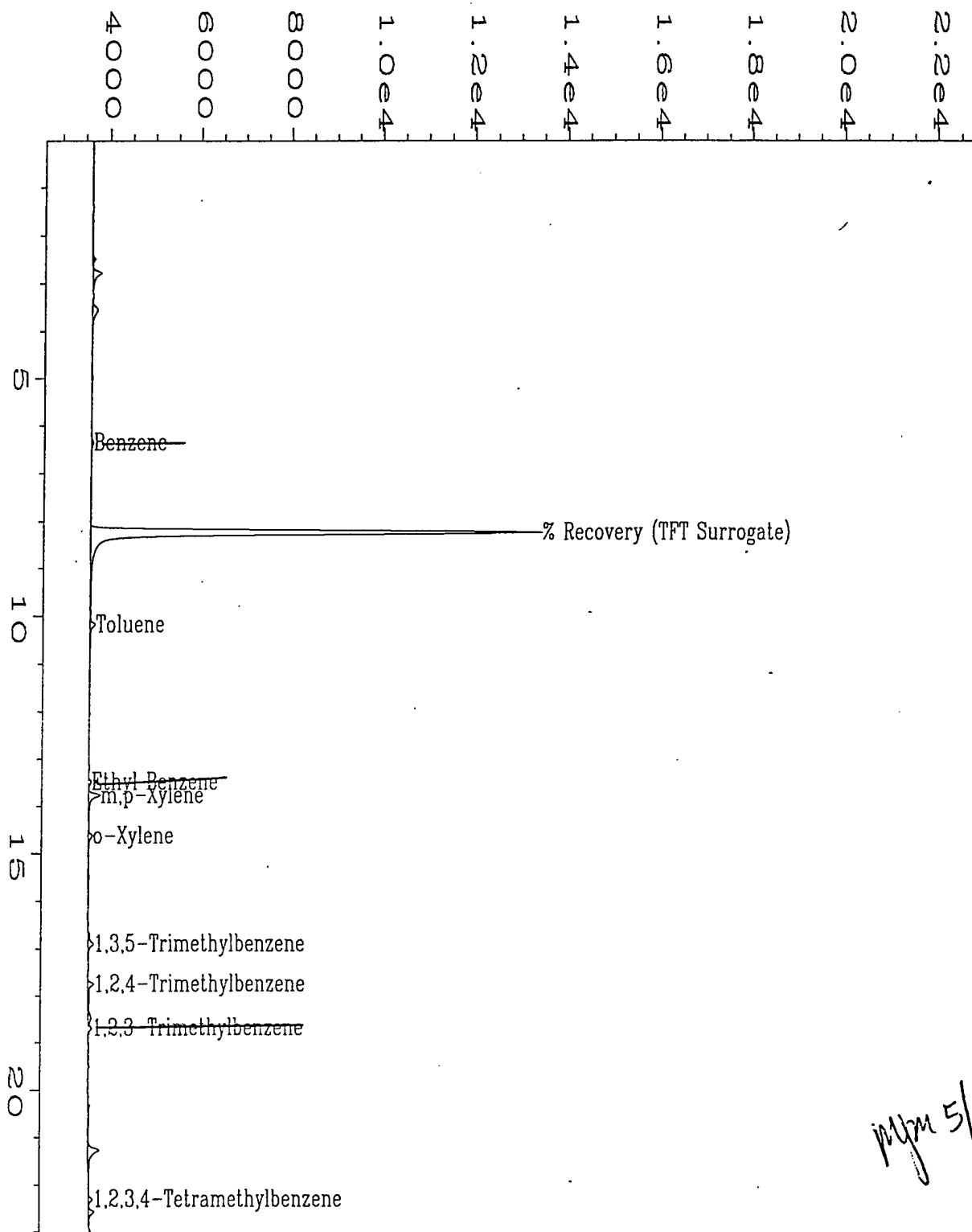
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

M. M. M.
Approved



mjm 5/15/95

Data File Name	: C:\HPCHEM\1\DATA\BX10420\030F0701.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 30
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05757;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	BX10420.MTH
Acquired on	: 21 Apr 95 04:34 AM	Analysis Method	: BX10420B.MTH
Report Created on:	21 Apr 95 12:52 PM	Sample Amount	: 0
Not Recalib on	: 21 APR 95 12:15 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT#: 95-1217 CLIENT#: MW-10 10-11' SOIL		

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Method 8020 Data Report

Client Sample Number : MW-10 11-12'
Lab Sample Number : X05758
Date Sampled : 4/12/95
Date Received : 4/14/95
Date Extracted/Prepared : 4/20/95
Date Analyzed : 4/20/95
% Moisture : 21.37%

Client Project No. : 722450.26020/Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1.00
Method : 8020
Matrix : Soil
Lab File No. : BX1042013
Method Blank No. : MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	5.1
Toluene	108-88-3	U	5.1
Chlorobenzene	108-90-7	U	5.1
Ethyl Benzene	100-41-4	U	5.1
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	5.1
1,3,5-Trimethylbenzene	108-67-8	U	5.1
,2,4-Trimethylbenzene	95-63-6	U	5.1
1,2,3-Trimethylbenzene	526-73-8	U	5.1
1,2,3,4-Tetramethylbenzene	488-23-3	U	5.1
Surrogate Recovery (α,α,α -Trifluorotoluene):		86%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

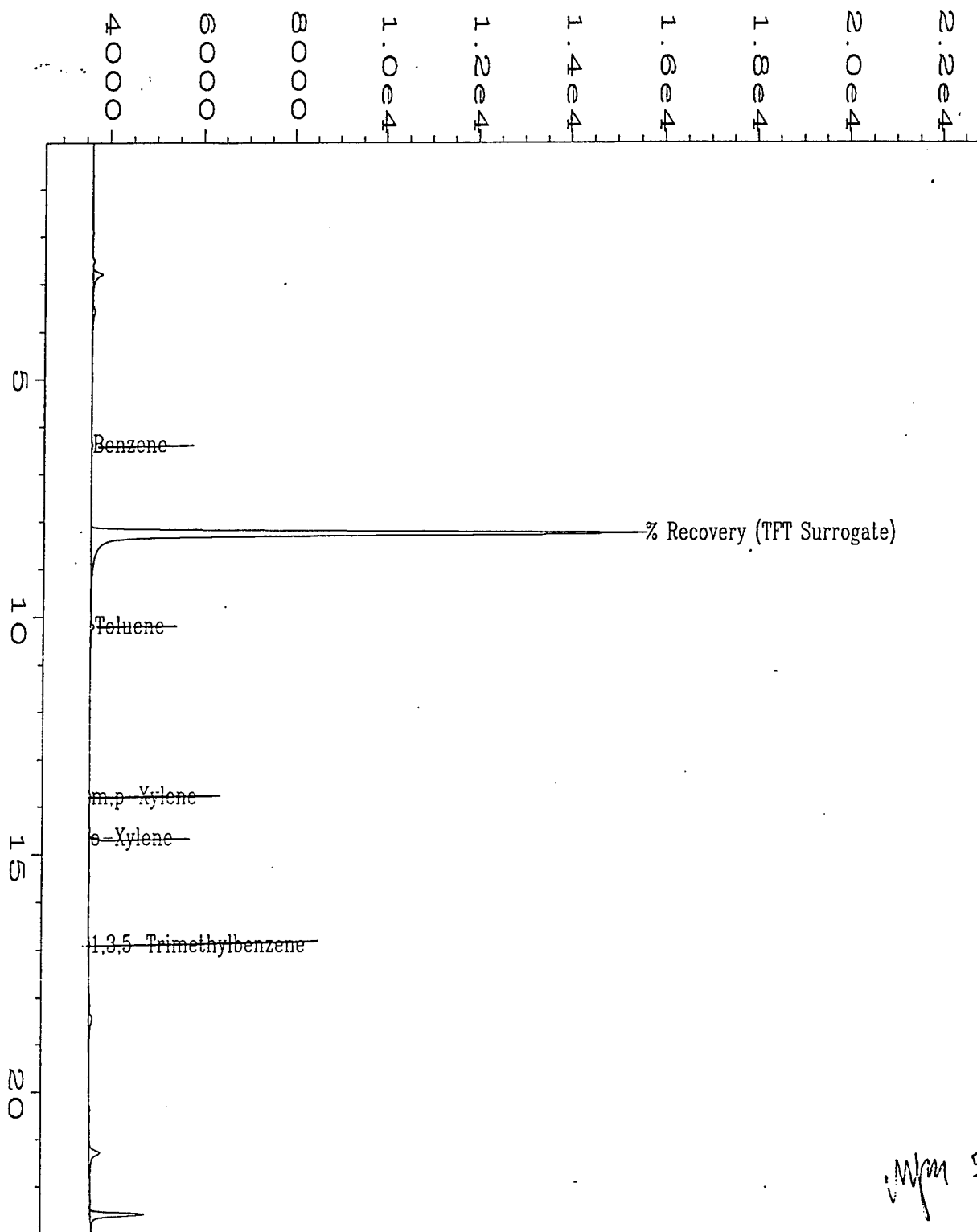
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

Murphy
Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10420\013F0701.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 13
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05758;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	BX10420.MTH
Acquired on	: 20 Apr 95 05:13 PM	Analysis Method	: BX10420B.MTH
Report Created on:	21 Apr 95 12:40 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 12:15 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project # 95-1217 Client # MW-10 11-12' Soil		

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Method 8020 Data Report

Client Sample Number : MW-10 11-12'
Lab Sample Number : X05758DUP
Date Sampled : 4/12/95
Date Received : 4/14/95
Date Extracted/Prepared : 4/20/95
Date Analyzed : 4/20/95
% Moisture : 21.37%

Client Project No. : 722450.26020/Seymo
Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1.00
Method : 8020
Matrix : Soil
Lab File No. : BX2042016
Method Blank No. : MB042095

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	U	5.1
Toluene	108-88-3	U	5.1
Chlorobenzene	108-90-7	U	5.1
Ethyl Benzene	100-41-4	U	5.1
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	5.1
3,5-Trimethylbenzene	108-67-8	U	5.1
1,2,4-Trimethylbenzene	95-63-6	U	5.1
1,2,3-Trimethylbenzene	526-73-8	U	5.1
1,2,3,4-Tetramethylbenzene	488-23-3	U	5.1
Surrogate Recovery (α,α,α -Trifluorotoluene):		64%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

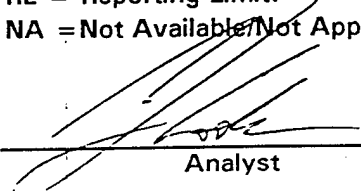
U = Compound analyzed for, but not detected.


B = Compound also found in the blank.

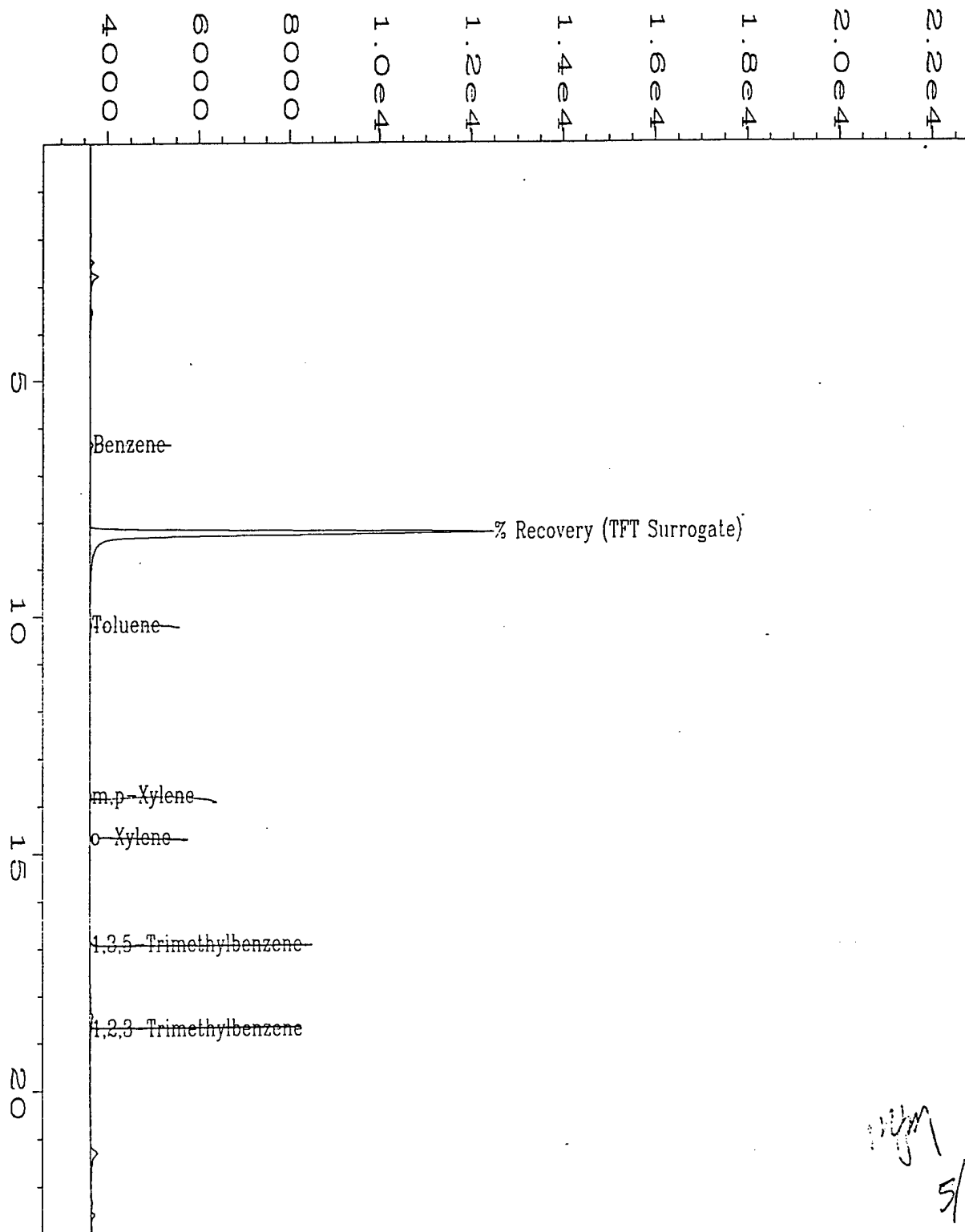
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\BX10420\016F0701.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 16
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05758Dup;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	BX10420.MTH
Acquired on	: 20 Apr 95 07:12 PM	Analysis Method	: BX10420B.MTH
Report Created on:	21 Apr 95 12:41 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 12:15 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project # 95-1217 Client # MW-10 11-12' Dupl.		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-11 11.5-13.5'	Client Project No.	: 722450.26020/Seym Johnson AFB
Lab Sample Number	: X05759	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 1.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/22/95	Matrix	: Soil
Date Analyzed	: 4/23/95	Lab File No.	: BX2042227
% Moisture	: 21.70%	Method Blank No.	: MB042295

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	6.2	5.1
Toluene	108-88-3	4.2	5.1
Chlorobenzene	108-90-7	U	5.1
Ethyl Benzene	100-41-4	2.8 J	5.1
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	33	5.1
1,3,5-Trimethylbenzene	108-67-8	U	5.1
1,2,4-Trimethylbenzene	95-63-6	4.9	5.1
1,2,3-Trimethylbenzene	526-73-8	1.8 J	5.1
1,2,3,4-Tetramethylbenzene	488-23-3	U	5.1
Surrogate Recovery (α,α,α -Trifluorotoluene):		80%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

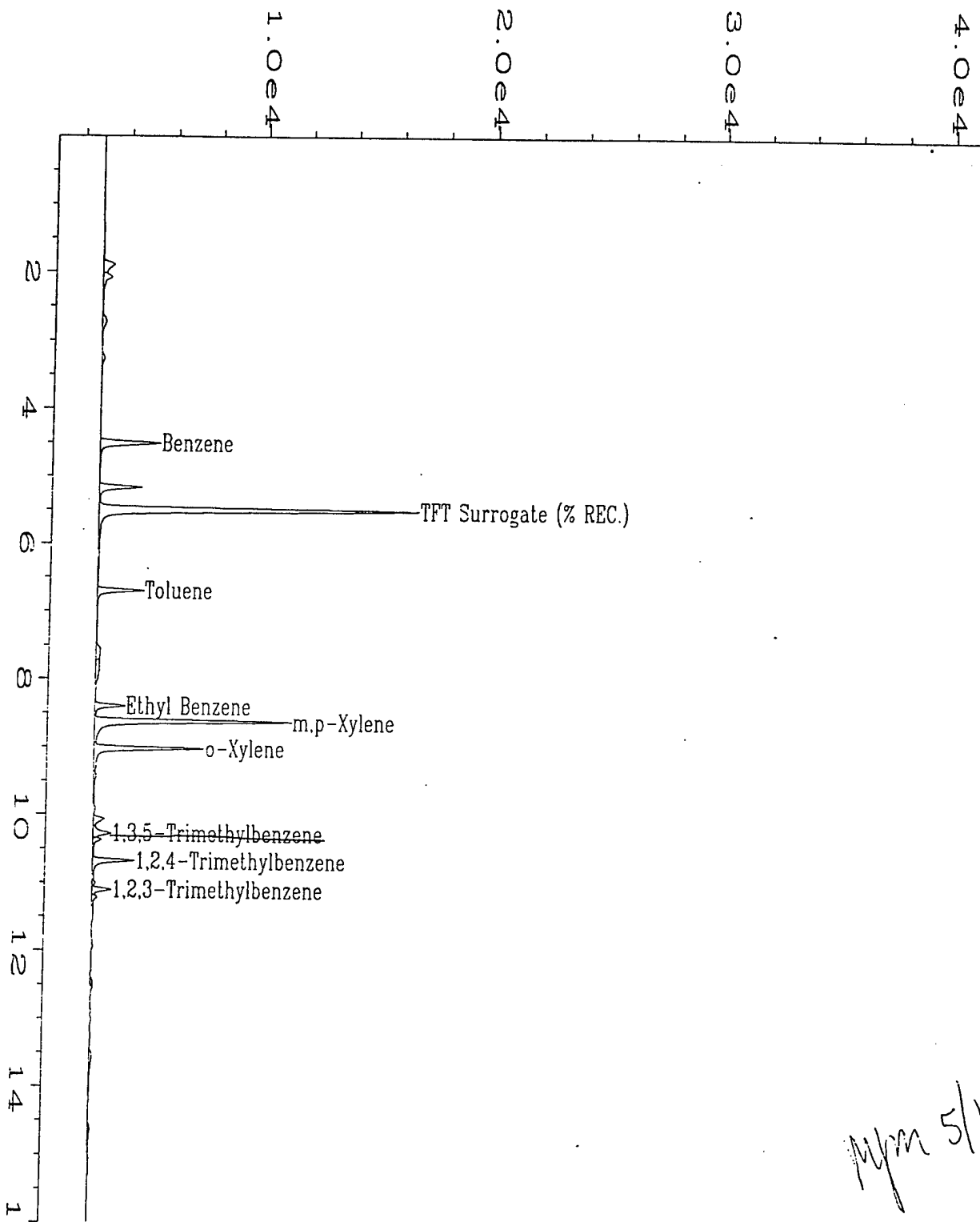
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

WPM
Approved



M/m 5/15/95

Data File Name	: C:\HPCHEM\2\DATA\BX20422\027R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 27
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05759;1;5	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20422.MTH
Acquired on	: 23 Apr 95 02:08 AM	Analysis Method	: BX20422.MTH
Report Created on:	25 Apr 95 02:24 PM	Sample Amount	: 0
Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 1		

MW-11 11.5-13.5'

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(303) 425-80201

Method 8020 Data Report

Client Sample Number : SS-1 11.5-13.5
Lab Sample Number : X05760
Date Sampled : 4/13/95
Date Received : 4/14/95
Date Extracted/Prepared : 4/25/95
Date Analyzed : 4/25/95
% Moisture : 8.40%

Client Project No. : 722450.26020/Seym
Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1250.00
Method : 8020
Matrix : Soil/Extract
Lab File No. : BX2042516
Method Blank No. : MEB042595

Compound Name	Cas Number	Sample*		RL*
		Concentration		
		ug/Kg		ug/Kg
Benzene	71-43-2	2100	J	5500
Toluene	108-88-3	16000		5500
Chlorobenzene	108-90-7	6000		5500
Ethyl Benzene	100-41-4	21000		5500
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	130000	B	5500
1,3,5-Trimethylbenzene	108-67-8	27000		5500
1,2,4-Trimethylbenzene	95-63-6	77000		5500
1,2,3-Trimethylbenzene	526-73-8	28000	B	5500
1,2,3,4-Tetramethylbenzene	488-23-3	20000		5500

Surrogate Recovery (α,α,α -Trifluorotoluene): 87% 50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

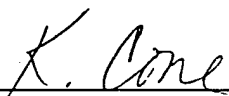
U = Compound analyzed for, but not detected.

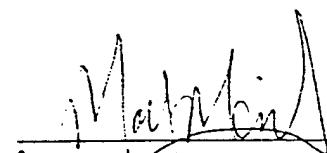
B = Compound also found in the blank.

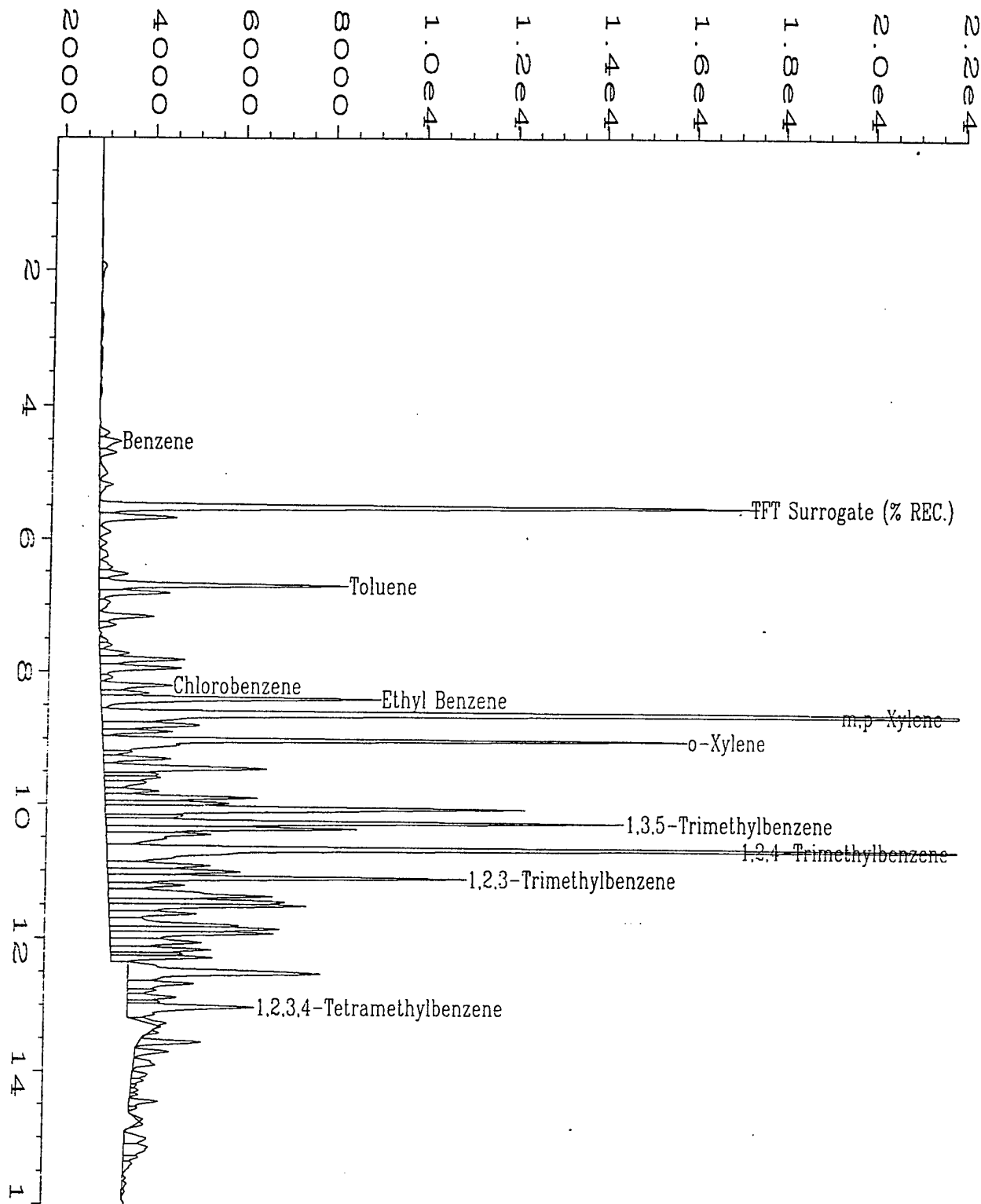
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20425\016R0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05760;1250;.004	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20425.MTH
Acquired on	: 25 Apr 95 06:17 PM	Analysis Method	: BX20425.MTH
Report Created on:	: 12 May 95 06:23 PM	Sample Amount	: 0
Recalib on	: 26 APR 95 09:49 AM	ISTD Amount	:
Multiplier	: 1365		
Sample Info	: Project # 95-1217 Client # SS-1 11.5-13.5 Soil Extract;		
	: 8.40% moisture		

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(303) 425-80201

Method 8020 Data Report

Client Sample Number	: SS-1 11.5-13.5 Dup.	Client Project No.	: 722450.26020/Seym Johnson AFB
Lab Sample Number	: X05760FD	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 1250.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/25/95	Matrix	: Soil/Extract
Date Analyzed	: 4/25/95	Lab File No.	: BX2042517
% Moisture	: 8.40%	Method Blank No.	: MEB042595

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	3400 J	5500
Toluene	108-88-3	27000	5500
Chlorobenzene	108-90-7	8700	5500
Ethyl Benzene	100-41-4	33000	5500
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	21000 B	5500
1,3,5-Trimethylbenzene	108-67-8	44000	5500
1,2,4-Trimethylbenzene	95-63-6	**	5500
1,2,3-Trimethylbenzene	526-73-8	44000 B	5500
1,2,3,4-Tetramethylbenzene	488-23-3	31000	5500

Surrogate Recovery (α,α,α -Trifluorotoluene):	87%	50%-150% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

** = See BX2042614 for noted values, DF = 2500.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

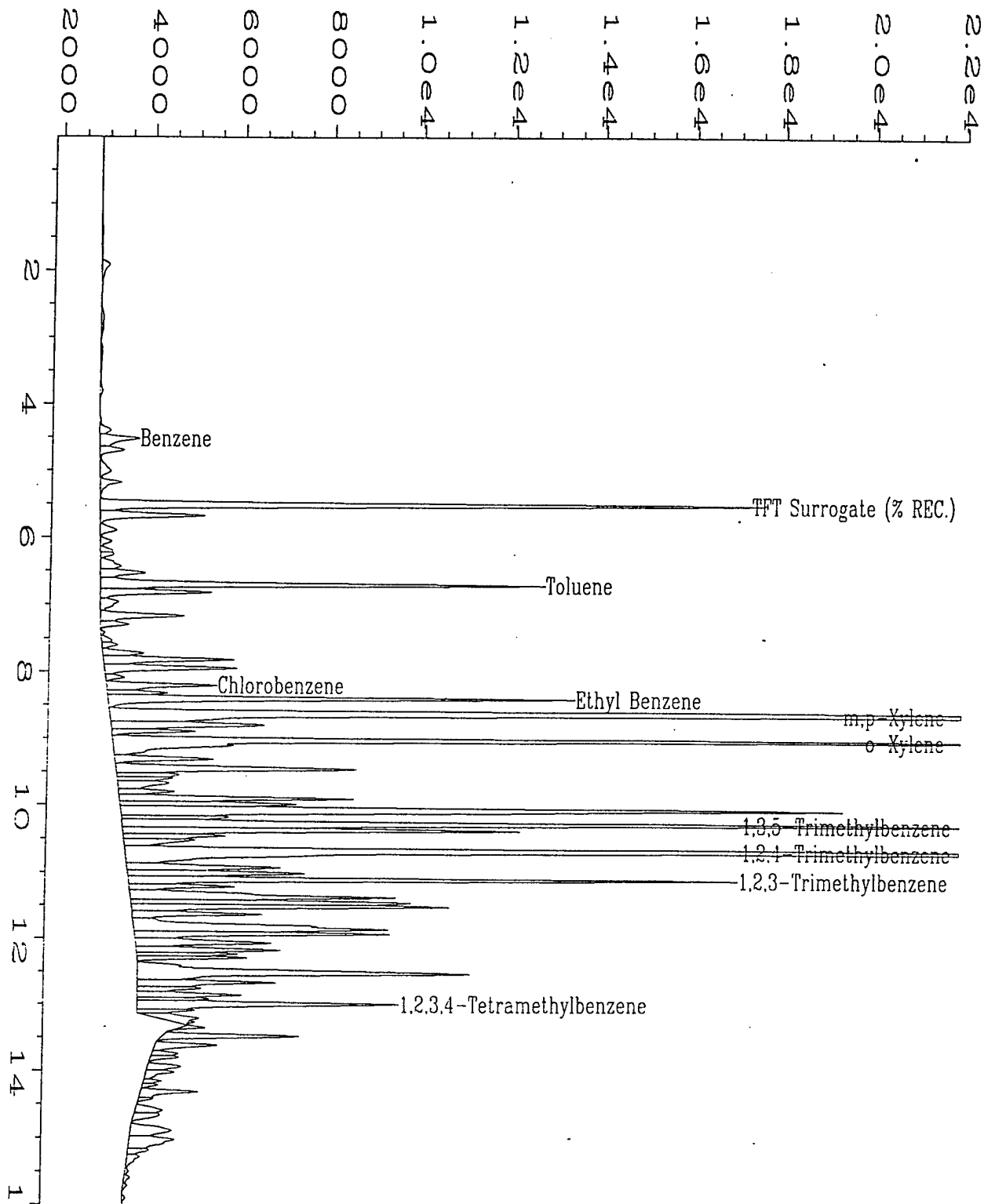
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

M. Martin
Approved:



Data File Name	: C:\HPCHEM\2\DATA\BX20425\017R0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 17
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05760Dup;1250;	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20425.MTH
Acquired on	: 25 Apr 95 06:56 PM	Analysis Method	: BX20425.MTH
Report Created on:	: 12 May 95 06:23 PM	Sample Amount	: 0
: Recalib on	: 26 APR 95 09:49 AM	ISTD Amount	:
Multiplier	: 1365		
Sample Info	: Project # 95-1217 Client # SS-1 11.5-13.5 Dup. (New Ex 4/25); 8.40% moisture		

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(303) 425-80201

Method 8020 Data Report

Client Sample Number	: SS-1 11.5-13.5 Dup.	Client Project No.	: 722450.26020/Seym
Lab Sample Number	: X05760FD		Johnson AFB
Date Sampled	: 4/13/95	Lab Project No.	: 95-1217
Date Received	: 4/14/95	Dilution Factor	: 2500.00
Date Extracted/Prepared	: 4/26/95	Method	: 8020
Date Analyzed	: 4/26/95	Matrix	: Soil/Extract
% Moisture	: 8.40%	Lab File No.	: BX2042614
		Method Blank No.	: MEB042595

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	**	**
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
1,2,4-Trimethylbenzene	95-63-6	14000	11000
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	**	**
Surrogate Recovery (α,α,α -Trifluorotoluene):		100%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

** = See BX2042517 for noted values, DF = 1250.

QUALIFIERS:

E = Extrapolated value.

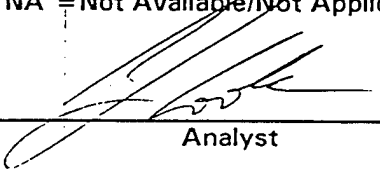
U = Compound analyzed for, but not detected.

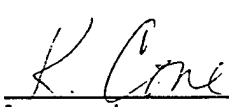
B = Compound also found in the blank.

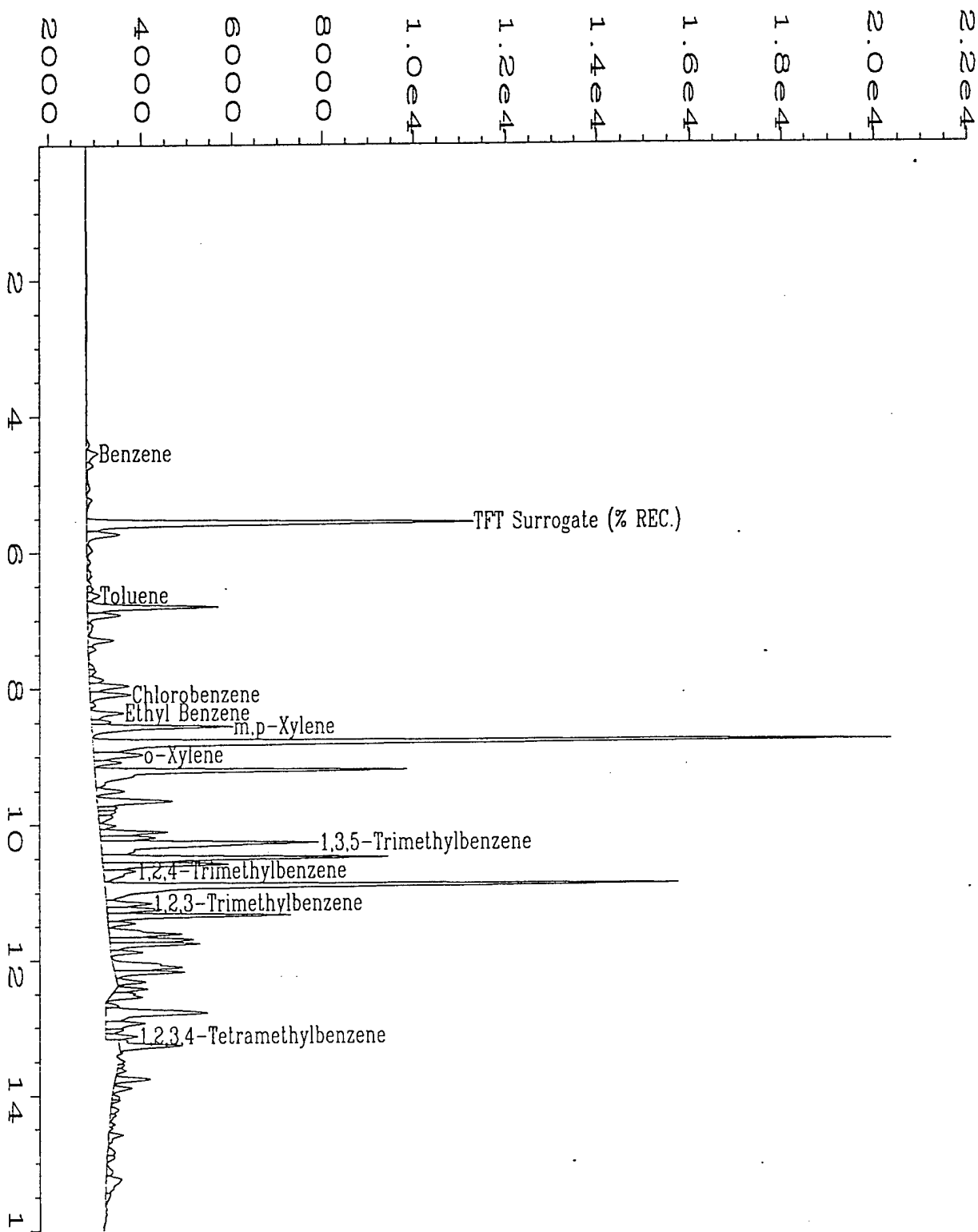
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20426\014R1001.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05760DUP;2500;	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20426.MTH
Acquired on	: 26 Apr 95 05:14 PM	Analysis Method	: BX20426.MTH
Report Created on:	26 Apr 95 07:01 PM	Sample Amount	: 0
Recalib on	: 26 APR 95 02:33 PM	ISTD Amount	:
Multiplier	: 2500		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 Soil Extract		

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Method 8020 Data Report

Client Sample Number	: SS-1 16'-18'	Client Project No.	: 722450.26020/Seym
Lab Sample Number	: X05762		Johnson AFB
Date Sampled	: 4/13/95	Lab Project No.	: 95-1217
Date Received	: 4/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/26/95	Method	: 8020
Date Analyzed	: 4/26/95	Matrix	: Soil
% Moisture	: 7.85%	Lab File No.	: BX2042613
		Method Blank No.	: MB042695

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	0.9 J	4.3
Toluene	108-88-3	5.1	4.3
Chlorobenzene	108-90-7	U	4.3
Ethyl Benzene	100-41-4	U	4.3
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	1.1 BJ	4.3
1,3,5-Trimethylbenzene	108-67-8	1.2 BJ	4.3
1,2,4-Trimethylbenzene	95-63-6	U	4.3
1,2,3-Trimethylbenzene	526-73-8	U	4.3
1,2,3,4-Tetramethylbenzene	488-23-3	U	4.3

Surrogate Recovery (α,α,α -Trifluorotoluene):	93%	50%-150% (QC limits)
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Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

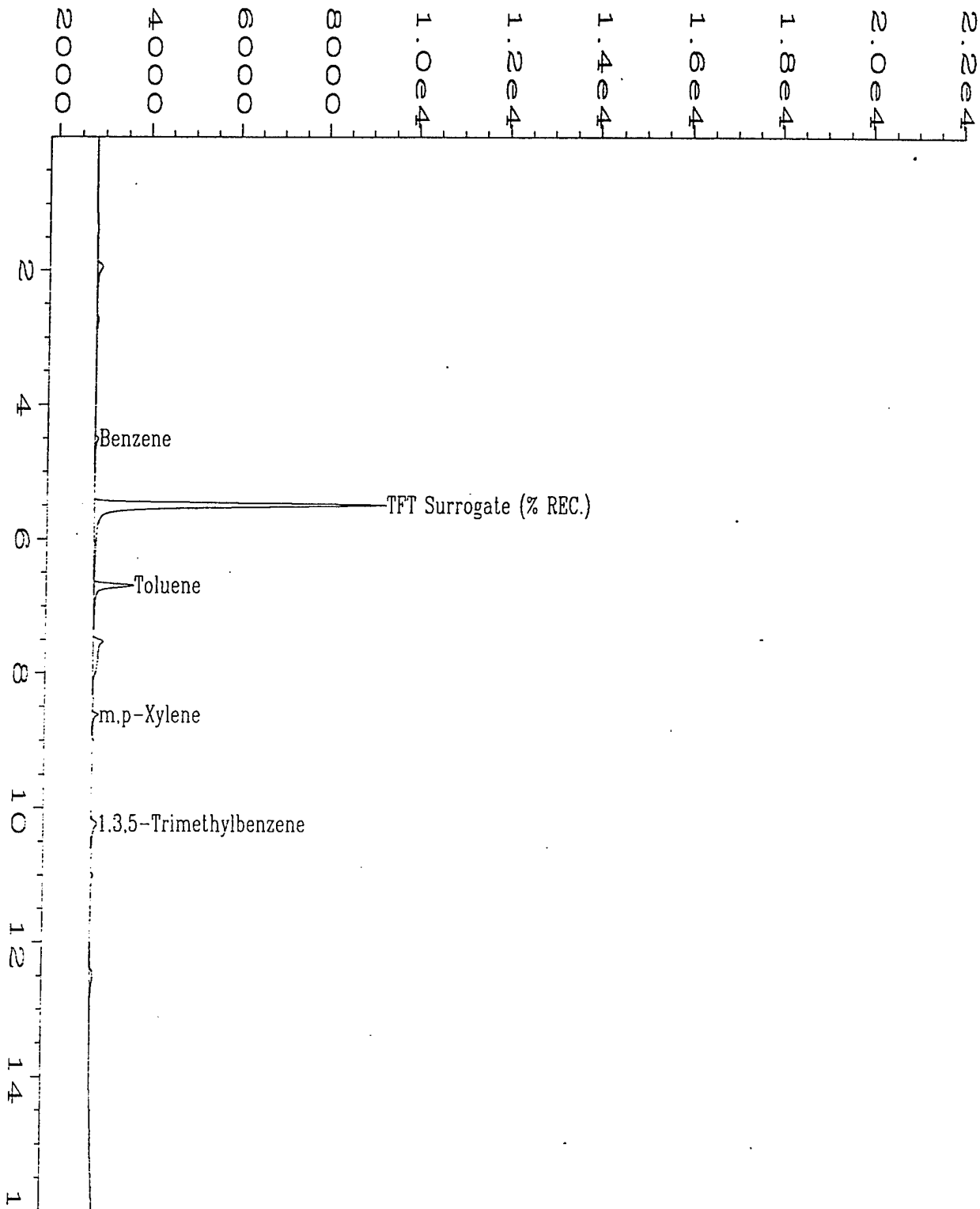
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20426\013R1001.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05762;1;5	Sequence Line	: 10
Run Time Bar Code:		Instrument Method:	BX20426.MTH
Acquired on	: 26 Apr 95 04:36 PM	Analysis Method	: BX20426.MTH
Report Created on:	26 Apr 95 07:01 PM	Sample Amount	: 0
: Recalib on	: 26 APR 95 02:33 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217	CLIENT #	SS-1 16'-18' Soil

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number : SS-2 11.5-13.5
Lab Sample Number : X05763
Date Sampled : 4/13/95
Date Received : 4/14/95
Date Extracted/Prepared : 4/23/95
Date Analyzed : 4/23/95
% Moisture : 6.62%

Client Project No. : 722450.26020/Seym
Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1.00
Method : 8020
Matrix : Soil
Lab File No. : BX2042316
Method Blank No. : MB042395

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	16	4.3
Toluene	108-88-3	29	4.3
Chlorobenzene	108-90-7	U	4.3
Ethyl Benzene	100-41-4	9.2	4.3
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	35 B	4.3
1,3,5-Trimethylbenzene	108-67-8	3.7 BJ	4.3
1,2,4-Trimethylbenzene	95-63-6	3.7 J	4.3
1,2,3-Trimethylbenzene	526-73-8	1.2 BJ	4.3
1,2,3,4-Tetramethylbenzene	488-23-3	3.7 J	4.3
Surrogate Recovery (α,α,α -Trifluorotoluene):		94%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

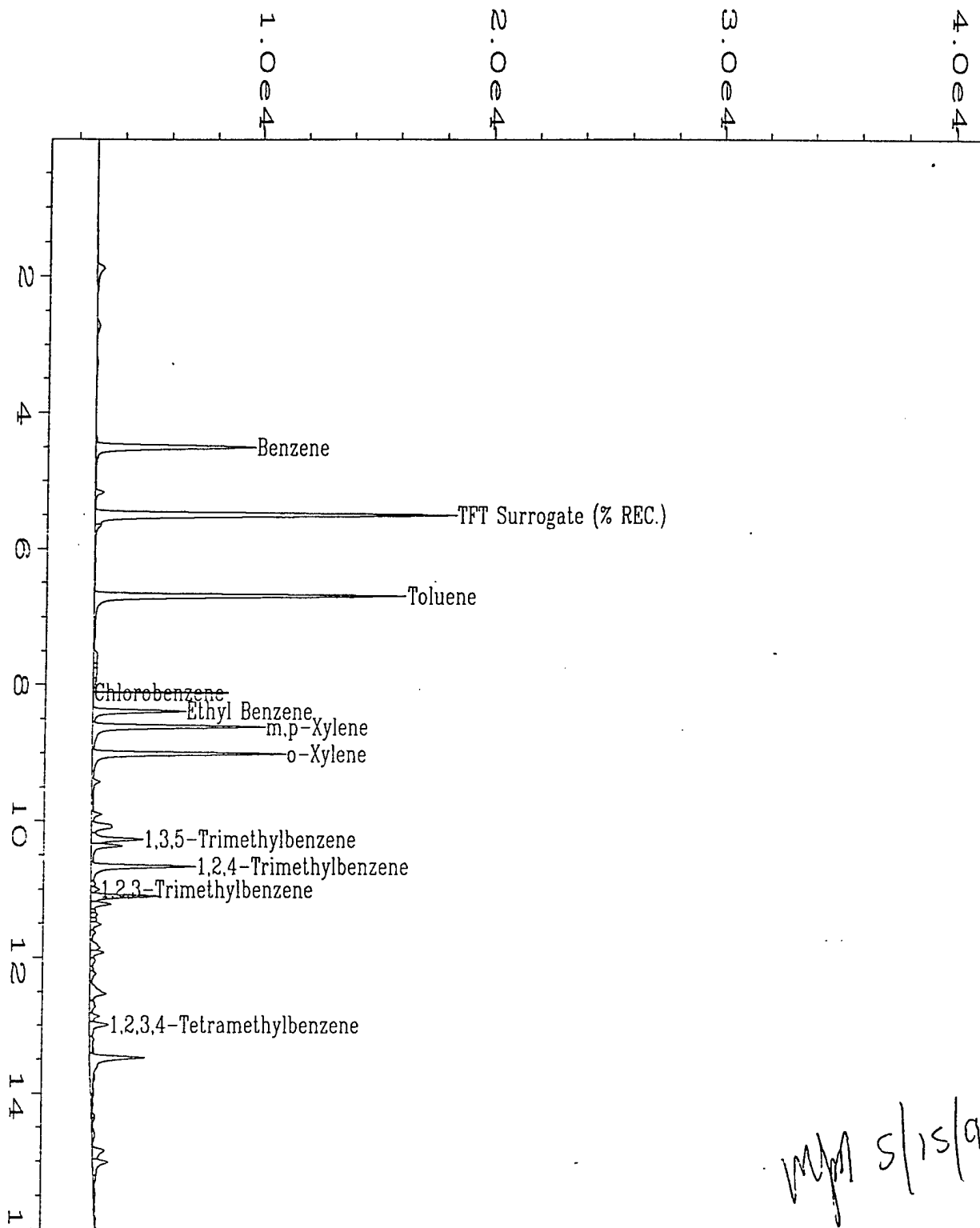
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

M. McNeil
Approved



mjm 5/15/95

Data File Name	: C:\HPCHEM\2\DATA\BX20423\016R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05763;1;5	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20423.MTH
Acquired on	: 23 Apr 95 05:49 PM	Analysis Method	: BX20423.MTH
Port Created on:	: 25 Apr 95 04:50 PM	Sample Amount	: 0
Recalib on	: 25 APR 95 04:27 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1217; SS-2 11 1/2-13 1/2'; 5 GRAMS SOIL/ext. <i>12K</i>		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: SS-2 11.5-13.5	Client Project No.	: 722450.26020/Seyn
Lab Sample Number	: X05763DUP		Johnson AFB
Date Sampled	: 4/13/95	Lab Project No.	: 95-1217
Date Received	: 4/14/95	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/23/95	Method	: 8020
Date Analyzed	: 4/23/95	Matrix	: Soil
% Moisture	: 6.62%	Lab File No.	: BX2042317
		Method Blank No.	: MB042395

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	35	4.3
Toluene	108-88-3	59	4.3
Chlorobenzene	108-90-7	0.5 J	4.3
Ethyl Benzene	100-41-4	19	4.3
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	63 B	4.3
1,3,5-Trimethylbenzene	108-67-8	7.1 B	4.3
1,2,4-Trimethylbenzene	95-63-6	20	4.3
1,2,3-Trimethylbenzene	526-73-8	1.7 BJ	4.3
1,2,3,4-Tetramethylbenzene	488-23-3	6.5	4.3
Surrogate Recovery (α,α,α -Trifluorotoluene):		88%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

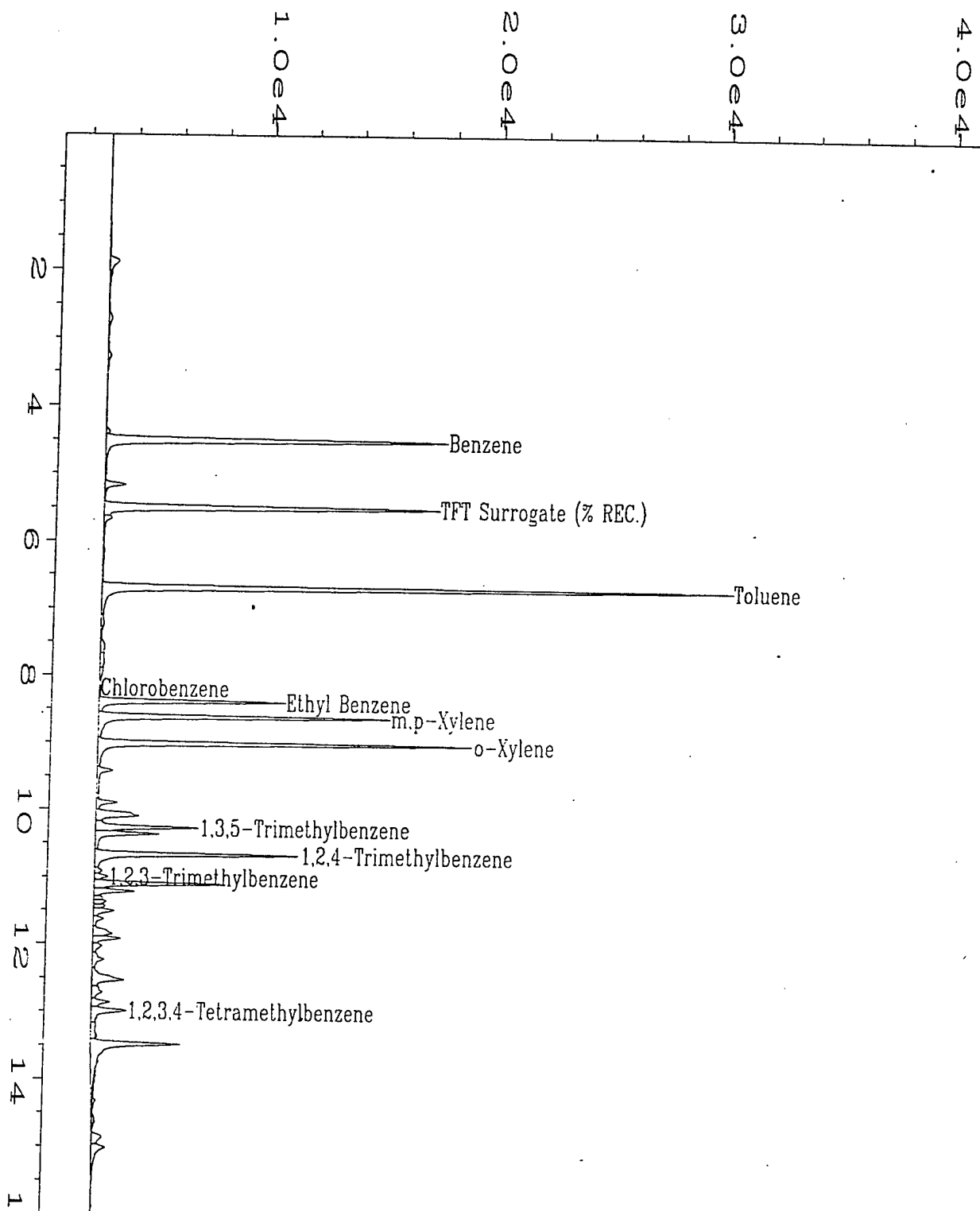
RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone

Analyst

[Signature]
Approved



Data File Name : C:\HPCHEM\2\DATA\BX20423\017R0901.D
 Operator : T.Lockwood
 Instrument : BTEX2
 Sample Name : X05763DUP;1;5
 Run Time Bar Code:
 Acquired on : 23 Apr 95 06:25 PM
 Report Created on: 25 Apr 95 04:50 PM
 Last Recalib on : 25 APR 95 04:27 PM
 Multiplier : 1
 Sample Info : 95-1217; SS-2 11 1/2-13 1/2'; 5 GRAMS SOIL/ext.

Page Number : 1
 Vial Number : 17
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX20423.MTH
 Analysis Method : BX20423.MTH
 Sample Amount : 0
 ISTD Amount

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(303) 425-80201

Method 8020 Data Report

Client Sample Number	: SS-3 9-11	Client Project No.	: 722450.26020/5071n Johnson AFB
Lab Sample Number	: X05764	Lab Project No.	: 95-1217
Date Sampled	: 4/13/95	Dilution Factor	: 125.00
Date Received	: 4/14/95	Method	: 8020
Date Extracted/Prepared	: 4/23/95	Matrix	: Soil/Extract
Date Analyzed	: 4/23/95	Lab File No.	: BX2042318
% Moisture	: 7.69%	Method Blank No.	: MEB042395

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	630	540
Toluene	108-88-3	8100	540
Chlorobenzene	108-90-7	770	540
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	**	**
Surrogate Recovery (α,α,α -Trifluorotoluene):		102%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

** = See BX2042615 for noted values, df = 1250.

QUALIFIERS:

E = Extrapolated value.

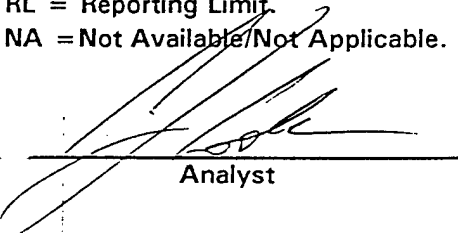
U = Compound analyzed for, but not detected.

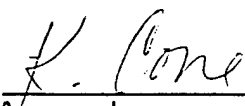
B = Compound also found in the blank.

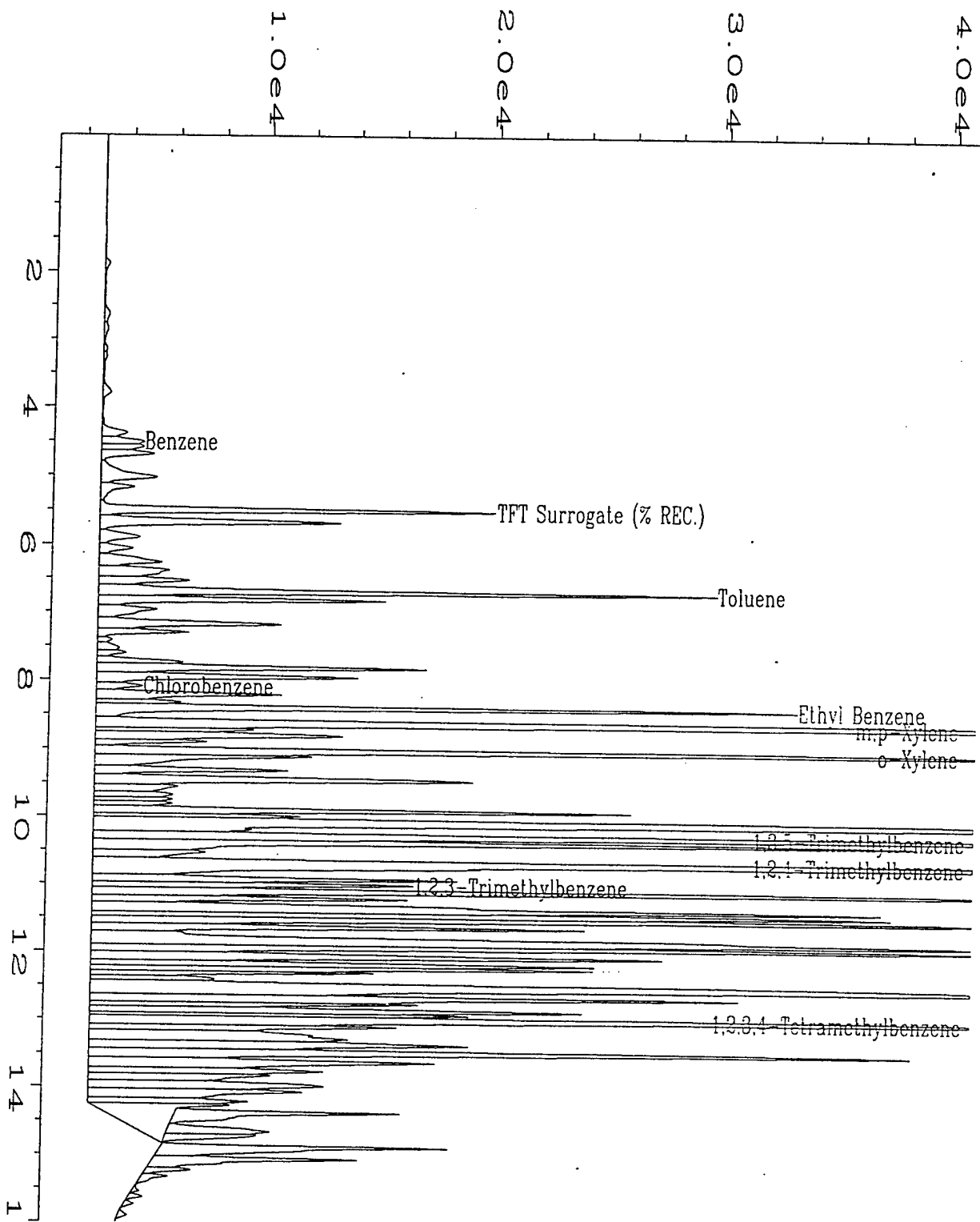
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20423\018R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 18
Instrument	: BTEX2 125	Injection Number	: 1
Sample Name	: X05764;X;5	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20423.MTH
Acquired on	: 23 Apr 95 07:01 PM	Analysis Method	: BX20423.MTH
Report Created on:	25 Apr 95 04:51 PM	Sample Amount	: 0
Test Recalib on	: 25 APR 95 04:27 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1217; SS-3 9-11; 5 GRAMS SOIL/ext.		

Ext *pgc*
mjm

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number : SS-3 9-11
Lab Sample Number : X05764
Date Sampled : 4/13/95
Date Received : 4/14/95
Date Extracted/Prepared : 4/26/95
Date Analyzed : 4/26/95
% Moisture : 7.69%

Client Project No. : 722450.26020/Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 1250.00
Method : 8020
Matrix : Soil/Extract
Lab File No. : BX2042615
Method Blank No. : MEB042595

Compound Name	Cas Number	Sample* Concentration ug/Kg	RL* ug/Kg
Benzene	71-43-2	**	**
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	9600	5400
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	43000 B	5400
1,3,5-Trimethylbenzene	108-67-8	16000	5400
1,2,4-Trimethylbenzene	95-63-6	39000	5400
1,2,3-Trimethylbenzene	526-73-8	17000 B	5400
1,2,3,4-Tetramethylbenzene	488-23-3	3400 J	5400
Surrogate Recovery (α,α,α -Trifluorotoluene):		96%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

** = See BX2042318 for noted values, df = 125.

QUALIFIERS:

E = Extrapolated value.

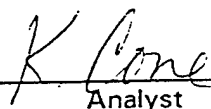
U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

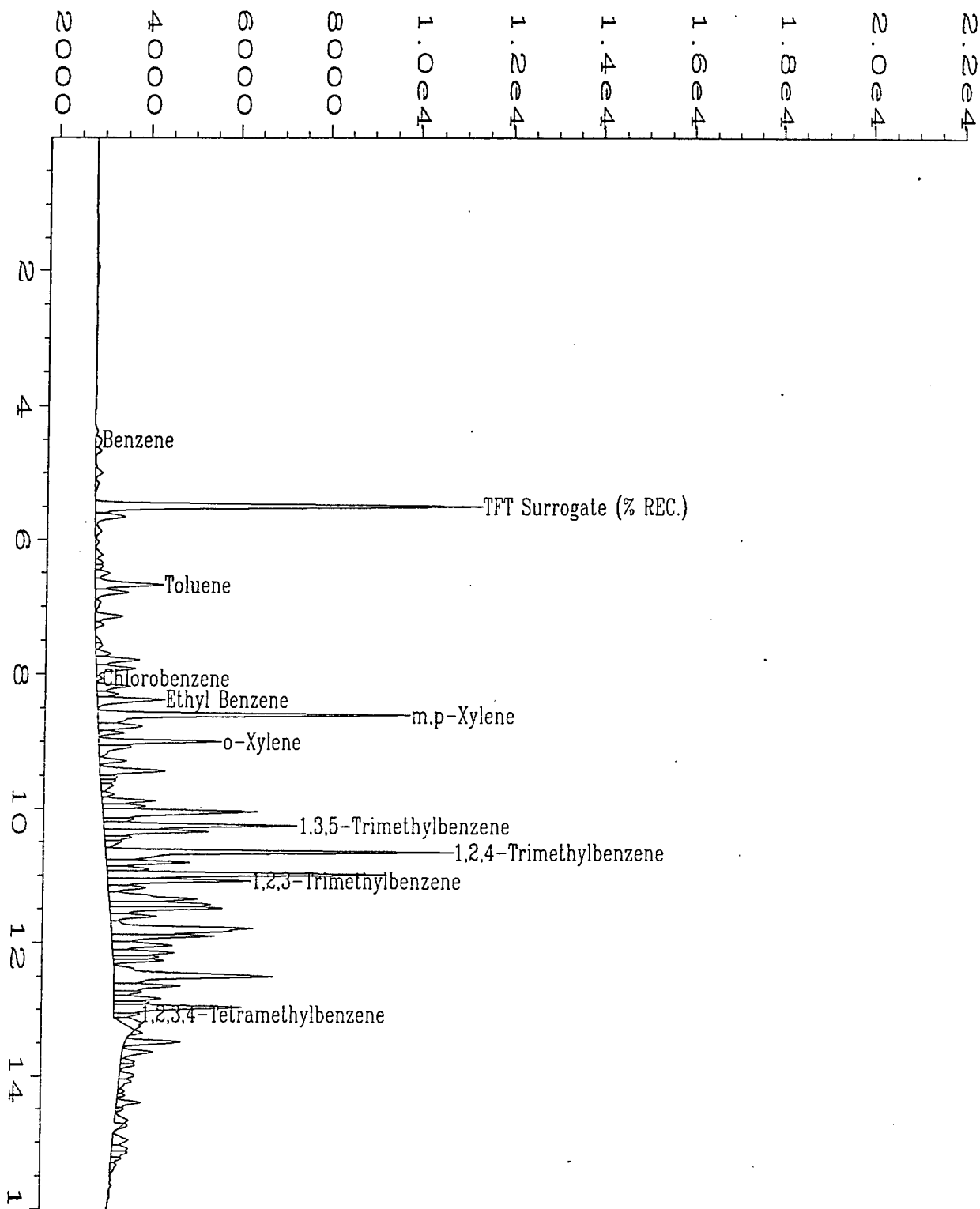
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst

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Data File Name	: C:\HPCHEM\2\DATA\BX20426\015R1001.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05764;1250;.01	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20426.MTH
Acquired on	: 26 Apr 95 05:53 PM	Analysis Method	: BX20426.MTH
Report Created on:	26 Apr 95 07:01 PM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 02:33 PM	ISTD Amount	:
Multiplier	: 1250		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 Soil Extract		

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Method 8020 Data Report

Client Sample Number : SS-1 11.5-13.5Dup
Lab Sample Number : X05764FD
Date Sampled : 4/13/95
Date Received : 4/14/95
Date Extracted/Prepared : 4/26/95
Date Analyzed : 4/26/95
% Moisture : 7.69%

Client Project No. : 722450.26020/Johnson AFB
Lab Project No. : 95-1217
Dilution Factor : 2500.00
Method : 8020
Matrix : Soil/Extract
Lab File No. : BX2042616
Method Blank No. : MEB042595

Compound Name	Cas Number	Sample*		RL*
		Concentration		
		ug/Kg		ug/Kg
Benzene	71-43-2	9200	J	11000
Toluene	108-88-3	8500	J	11000
Chlorobenzene	108-90-7	16000		11000
Ethyl Benzene	100-41-4	12000		11000
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	45000	B	11000
1,3,5-Trimethylbenzene	108-67-8	54000		11000
1,2,4-Trimethylbenzene	95-63-6	11000		11000
1,2,3-Trimethylbenzene	526-73-8	13000	B	11000
1,2,3,4-Tetramethylbenzene	488-23-3	16000		11000
Surrogate Recovery (α,α,α -Trifluorotoluene):		99%		50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

* = Dry weight basis.

QUALIFIERS:

E = Extrapolated value.

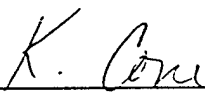
U = Compound analyzed for, but not detected.

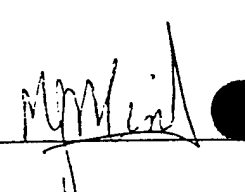
B = Compound also found in the blank.

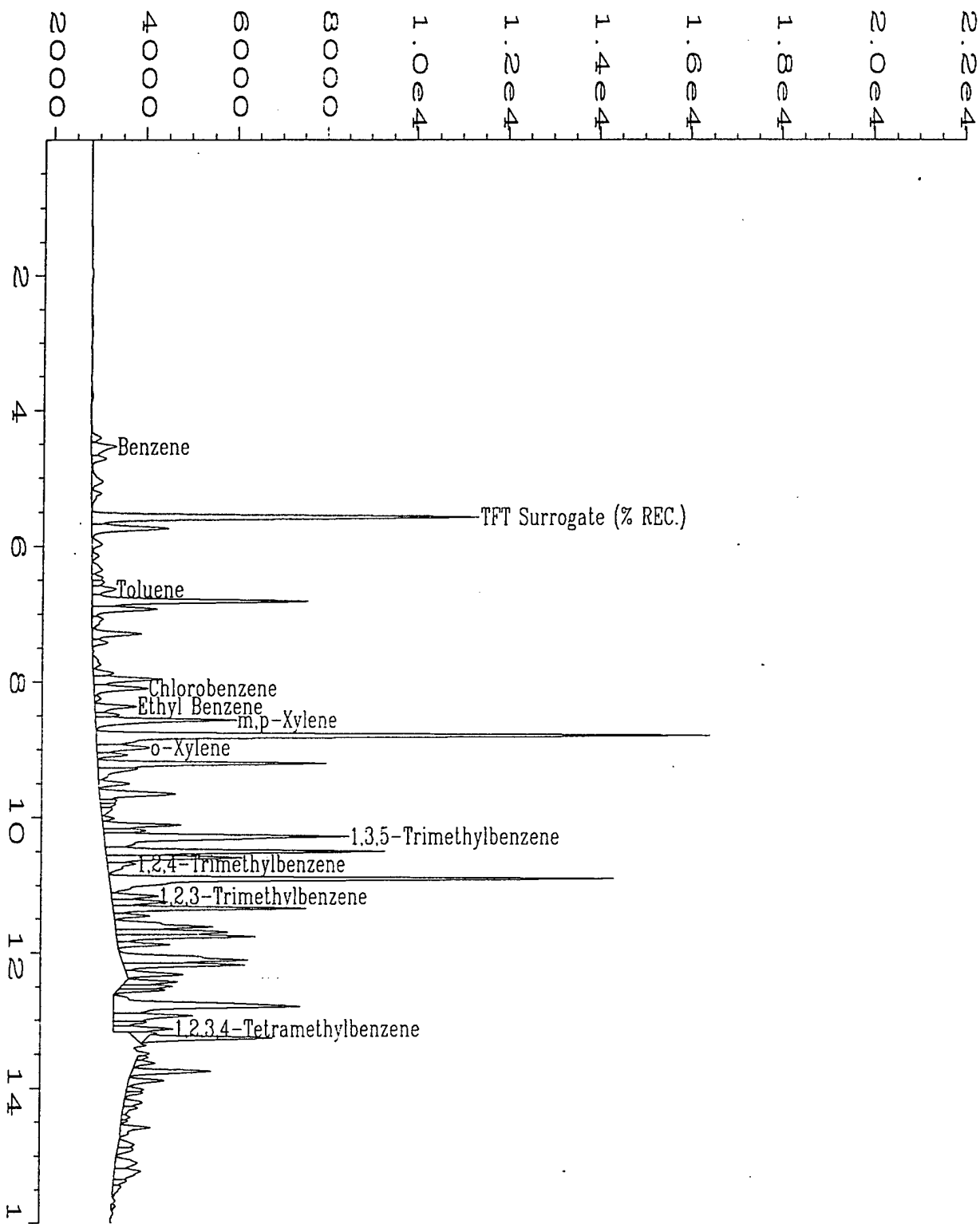
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


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Data File Name	: C:\HPCHEM\2\DATA\BX20426\016R1001.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05764DUP;2500;	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20426.MTH
Acquired on	: 26 Apr 95 06:31 PM	Analysis Method	: BX20426.MTH
Report Created on:	26 Apr 95 07:02 PM	Sample Amount	: 0
Test Recalib on	: 26 APR 95 02:33 PM	ISTD Amount	:
Multiplier	: 2500		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 Soil Extract		

EPA 602/8020 Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No. : MW-10 11-12'
Lab Sample No. : X05758
Date Sampled : 4/12/95
Date Received : 4/14/95
Date Prepared : 4/25/95, 4/20/95
Date Analyzed : 4/25/95, 4/20/95

Client Project No. : 722450.26020/
Seymore Johnson
Lab Project No. : 95-1217
EPA Method No. : 8020
Matrix : Soil
Lab File Number(s) : **
Method Blank : MB042595, MB042095
Dilution Factor : 1

Compound	Spike Added (ug/Kg)	Sample Concentration (ug/Kg)	Concentration (ug/Kg)		Comments
			MS	MSD	
Benzene	20.0	0.0	14.8	15.1	
Toluene	20.0	0.0	15.2	14.5	
Chlorobenzene	20.0	0.0	14.5	14.6	
Ethylbenzene	20.0	0.0	14.9	16.2	
m,p-Xylene	40.0	0.0	30.3 B	31.3	
o-Xylene	20.0	0.0	15.0	14.4	
1,3,5-TMB	20.0	0.0	15.1	14.4	
1,2,4-TMB	20.0	0.0	15.1	15.8	
1,2,3-TMB	20.0	0.0	14.7 B	13.4	
1,2,3,4-TeMB	20.0	0.0	15.9	14.2	
Surrogate	100.0	86%	82%	88%	% RECOVERY

Compound		MS % RECOVERY	MSD % RECOVERY	RPD	QC# Limits		
					RPD	%REC	
Benzene		74.0	75.5	2.0	25	50	- 150
Toluene		76.0	72.5	4.7	25	50	- 148
Chlorobenzene		72.5	73.0	0.7	25	55	- 135
Ethylbenzene		74.5	81.0	8.4	25	50	- 150
m,p-Xylene		75.8	78.3	3.2	25	50	- 150
o-Xylene		75.0	72.0	4.1	25	50	- 150
1,3,5-TMB		75.5	72.0	4.7	25	50	- 150
1,2,4-TMB		75.5	79.0	4.5	25	50	- 150
1,2,3-TMB		73.5	67.0	9.3	25	50	- 150
1,2,3,4-TeMB		79.5	71.0	11.3	25	50	- 150
Surrogate		82.0	88.0	NA	NA	50	- 150

= Values taken from EPA methods 602/8020.

* = Values outside of QC limits.

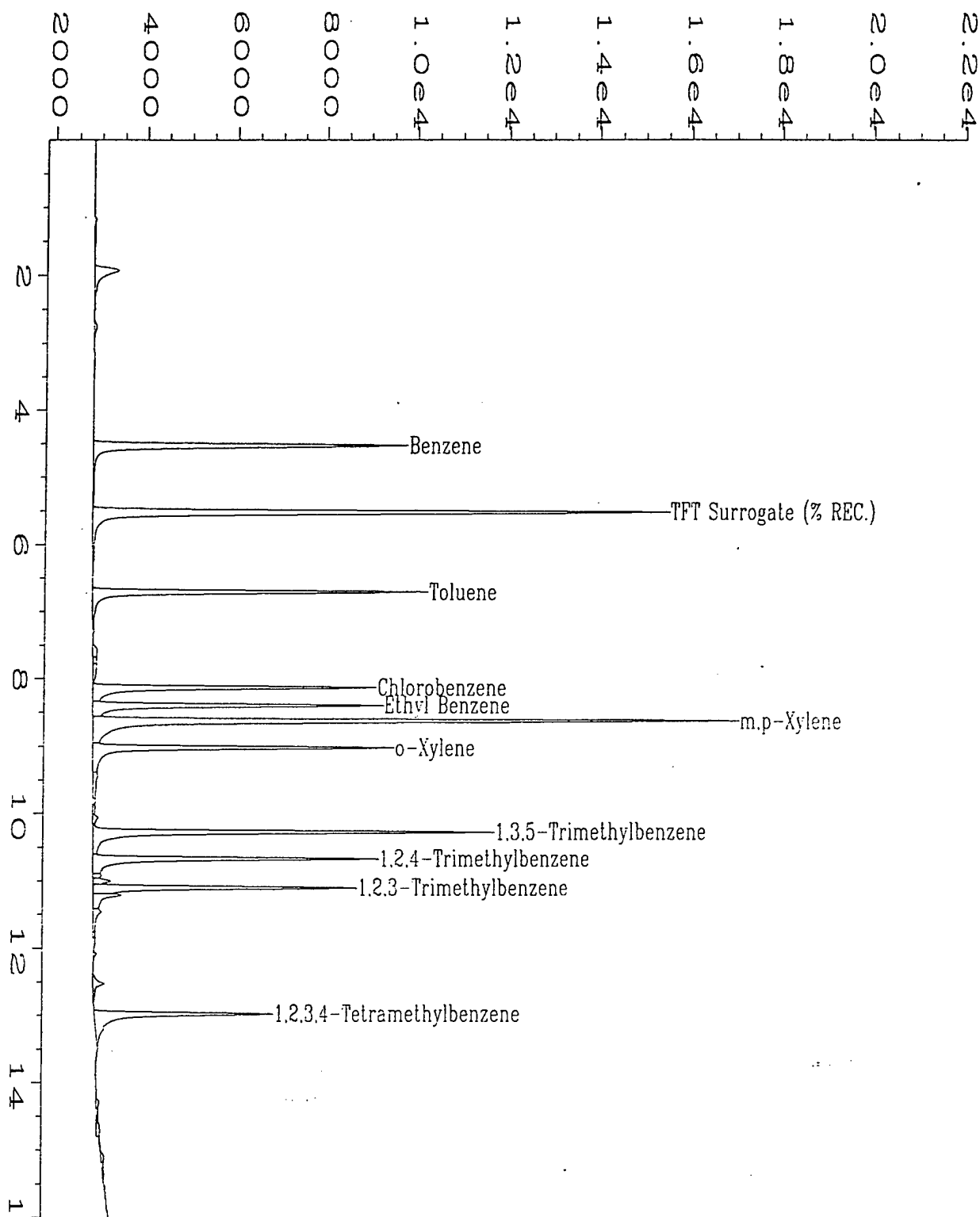
RPD: 0 out of (10) outside limits.

Spike Recovery: 0 out of (20) outside limits.

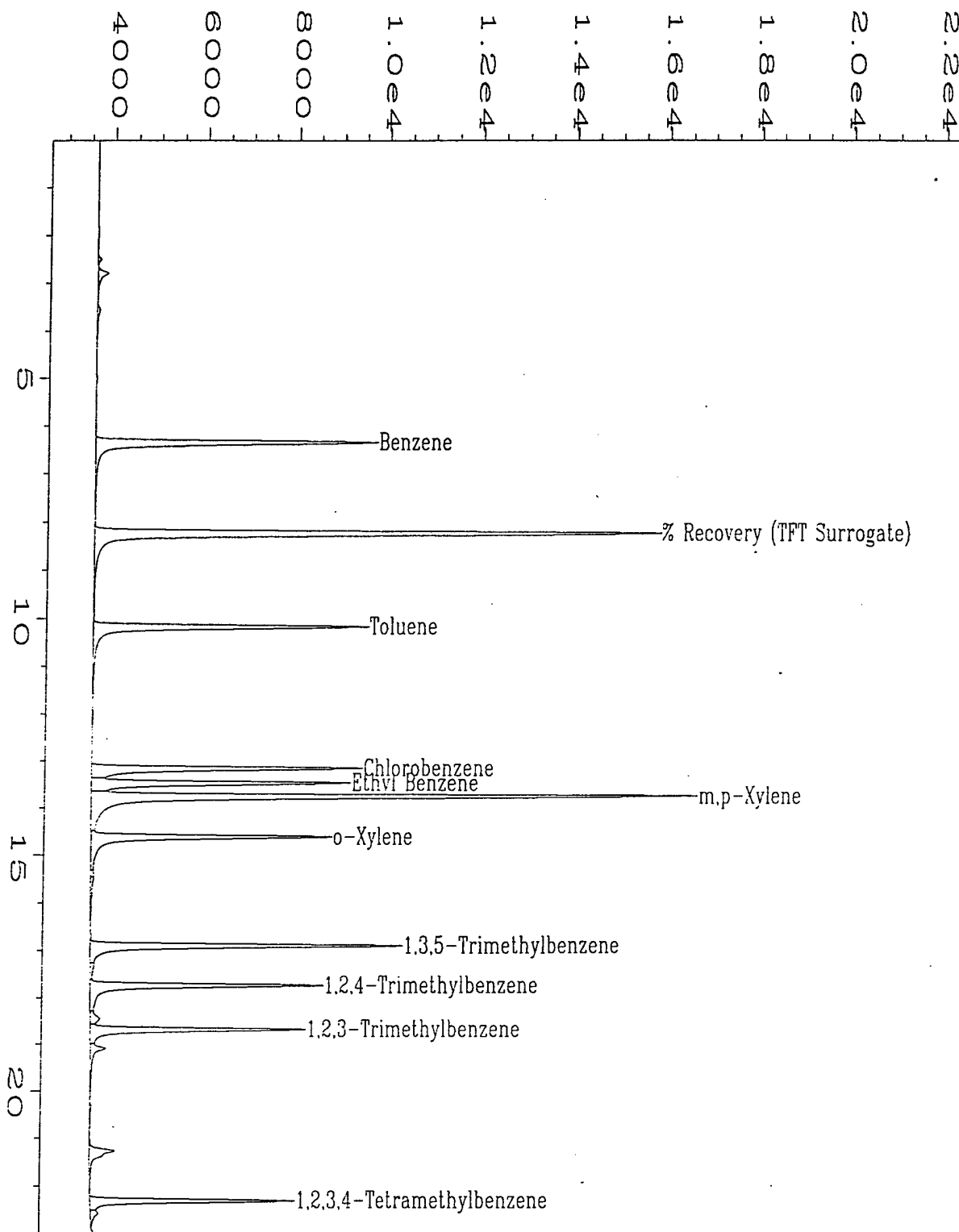
Comments: ** = Lab file numbers MS: BX2042514, MSD: BX1042015

K Cone
Analyst

AmCella
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Data File Name	: C:\HPCHEM\2\DATA\BX20425\014R0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05758MS;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20425.MTH
Acquired on	: 25 Apr 95 05:00 PM	Analysis Method	: BX20425.MTH
Report Created on:	: 12 May 95 06:14 PM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 09:49 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project # 95-1217 Client # MW-10 11'-12' Soil Matrix Spike		



Data File Name	: C:\HPCHEM\1\DATA\BX10420\015F0701.D	Page Number	: 1
Operator	: SW Tyson	Vial Number	: 15
Instrument	: BTEX1	Injection Number	: 1
Sample Name	: X05758MSD;1;5	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: BX10420.MTH
Acquired on	: 20 Apr 95 06:32 PM	Analysis Method	: BX10420B.MT
Report Created on:	21 Apr 95 12:41 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 12:15 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: Project # 95-1217 Client # MW-10 11-12' Spike Dupl.		

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042095	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/20/95	Method	: 602
Date Analyzed	: 4/20/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX10420008

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.7	83.5	71.0-119.0*
Toluene	108-88-3	16.4	82.0	73.0-111.0*
Chlorobenzene	108-90-7	17.1	85.5	64.0-119.0*
Ethyl Benzene	100-41-4	18.8	94.0	75.0-114.0*
m,p-Xylene	108-38-3	18.5	92.5	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	16.2	81.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	18.1	90.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	20.1	100.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.1	90.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		102%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

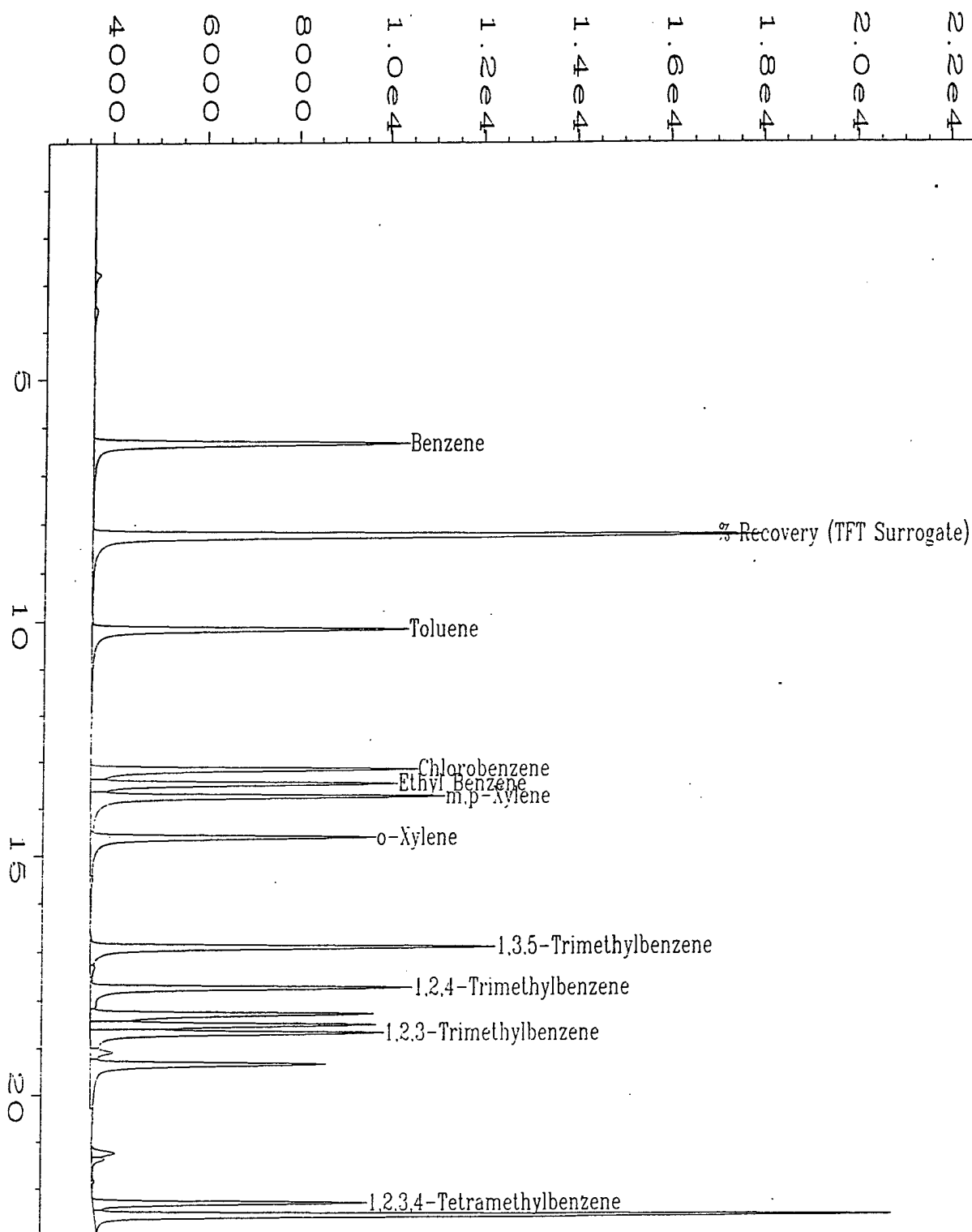
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected,*but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

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Data File Name : D:\1\DATA\BX10420\008F0701.D
 Operator : SW Tyson
 Instrument : BTEX1
 Sample Name : LCS042095
 Run Time Bar Code:
 Acquired on : 20 Apr 95 01:56 PM
 Report Created on: 15 May 95 10:31 AM
 Last Recalib on : 21 APR 95 12:15 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 8
 Injection Number : 1
 Sequence Line : 7
 Instrument Method: BX10420.MT
 Analysis Method : BX10420B.MT
 Sample Amount : 0
 ISTD Amount :

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042295	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/22/95	Method	: 602
Date Analyzed	: 4/22/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2042210

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	19.0	95.0	71.0-119.0*
Toluene	108-88-3	19.4	97.0	73.0-111.0*
Chlorobenzene	108-90-7	20.3	102	64.0-119.0*
Ethyl Benzene	100-41-4	19.9	99.5	75.0-114.0*
m,p-Xylene	108-38-3	18.7	93.5	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	19.7	98.5	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	20.9	105	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	19.4	97.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	21.3	107	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.5	92.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		98%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value


U = Compound analyzed for, but not detected.

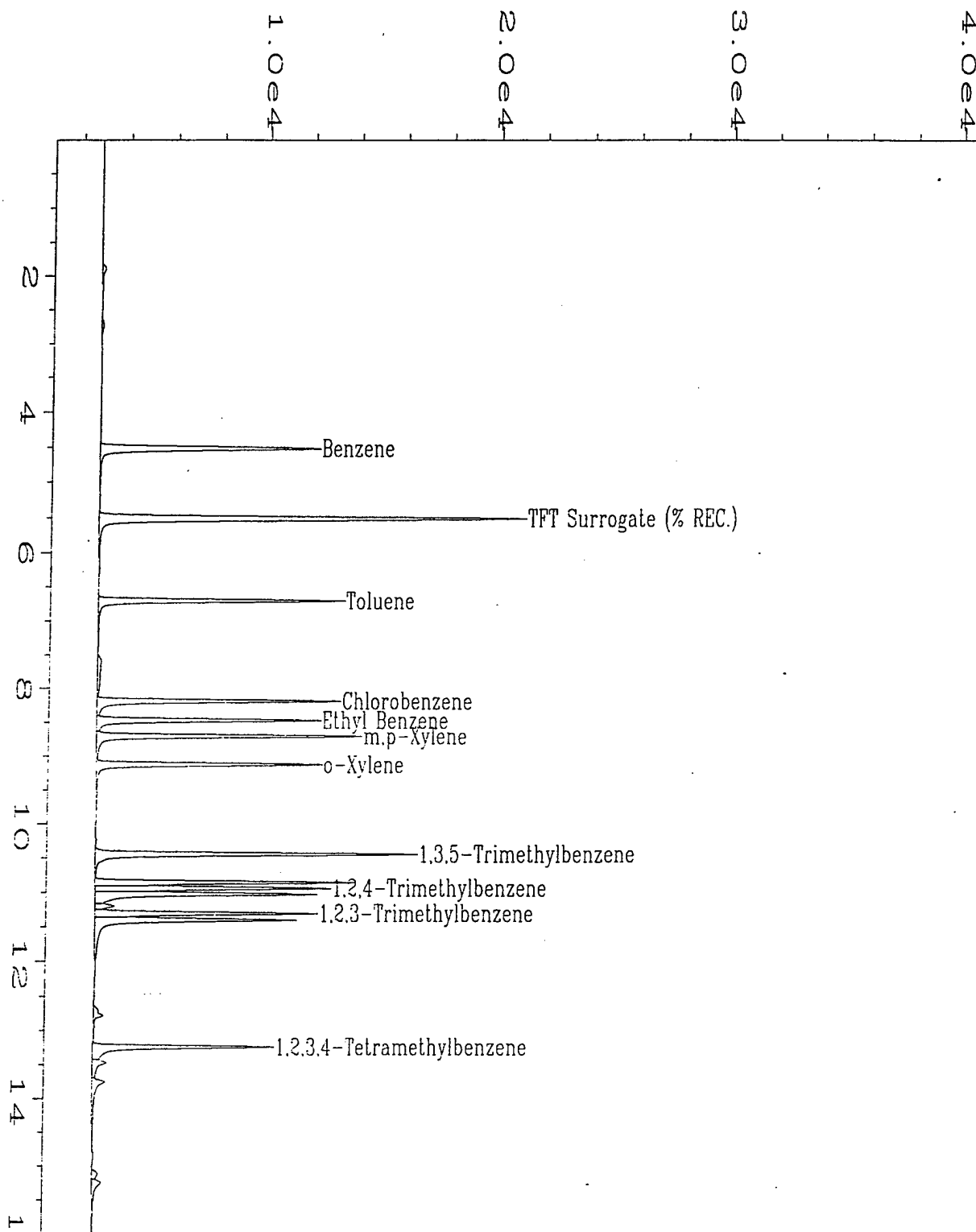
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\BX20422\010R1001.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS042295	Sequence Line	: 10
Run Time Bar Code:		Instrument Method:	BX20422.MTH
Acquired on	: 22 Apr 95 03:15 PM	Analysis Method	: BX20422.MTH
Report Created on:	24 Apr 95 06:36 PM	Sample Amount	: 0
Last Recalib on	: 24 APR 95 06:19 PM	ISTD Amount	:
Multiplier	: 1		

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BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS042395 Dilution Factor : 1.00
Date Extracted/Prepared : 4/23/95 Method : 602
Date Analyzed : 4/23/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX20423009

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.0	90.0	71.0-119.0*
Toluene	108-88-3	18.2	91.0	73.0-111.0*
Chlorobenzene	108-90-7	18.6	93.0	64.0-119.0*
Ethyl Benzene	100-41-4	18.8	94.0	75.0-114.0*
m,p-Xylene	108-38-3	20.0	100	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	18.4	92.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	19.6	98.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.1	90.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.1	95.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	20.8	104	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		103%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

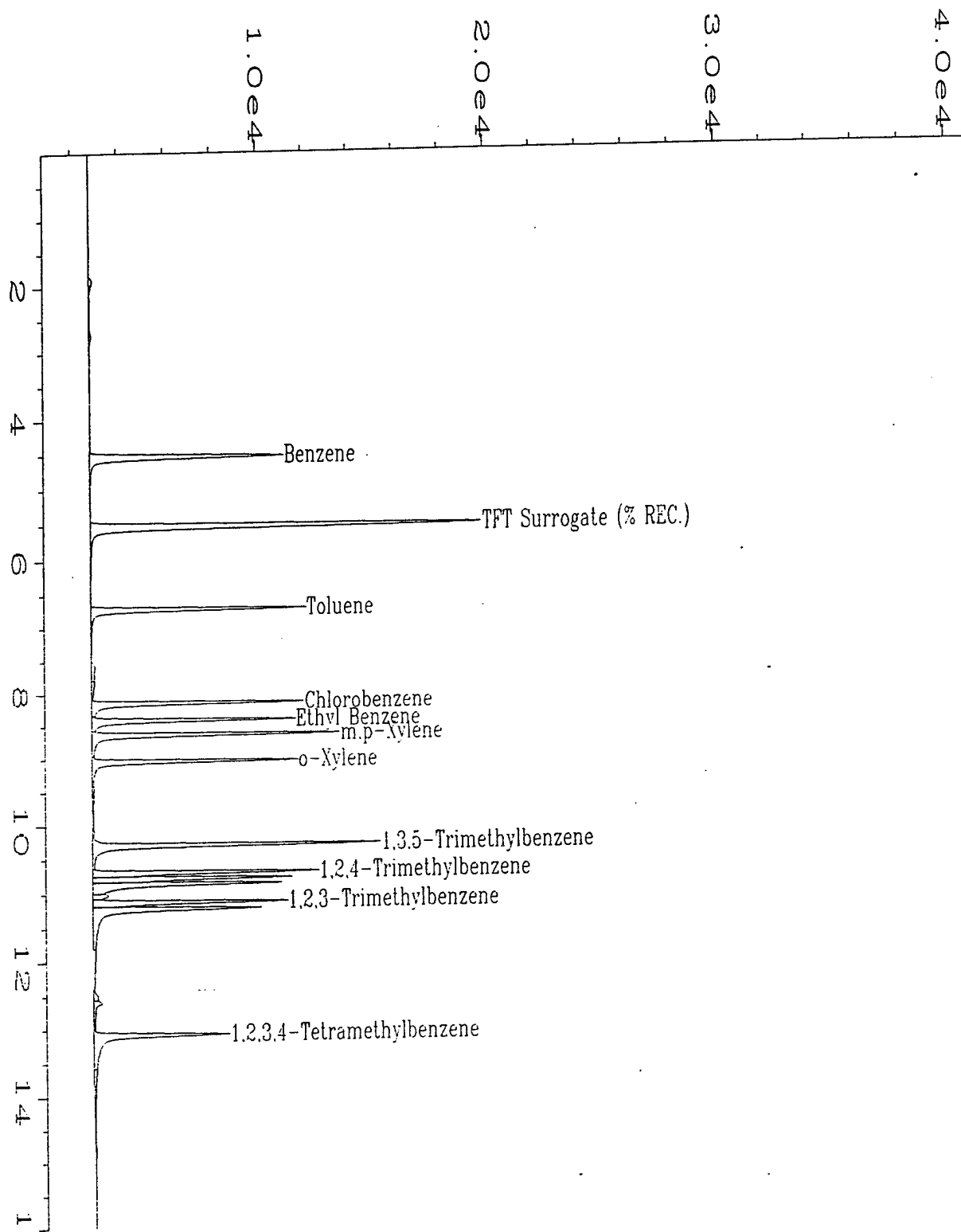
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

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Data File Name : D:\2\DATA\BX20423\009R0901.D
 Operator : T.Lockwood
 Instrument : BTEX2
 Sample Name : LCS042395
 Run Time Bar Code:
 Acquired on : 23 Apr 95 01:38 PM
 Report Created on: 15 May 95 10:37 AM
 Last Recalib on : 25 APR 95 04:27 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 9
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX20423.MTH
 Analysis Method : BX20423.MTH
 Sample Amount : 0
 ISTD Amount :

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BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS042595 Dilution Factor : 1.00
Date Extracted/Prepared : 4/25/95 Method : 602
Date Analyzed : 4/25/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2042510

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.9	84.5	71.0-119.0*
Toluene	108-88-3	17.7	88.5	73.0-111.0*
Chlorobenzene	108-90-7	18.2	91.0	64.0-119.0*
Ethyl Benzene	100-41-4	18.6	93.0	75.0-114.0*
m,p-Xylene	108-38-3	20.0	100.0	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	18.3	91.5	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	20.8	104.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	19.7	98.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	22.5	112.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		96%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

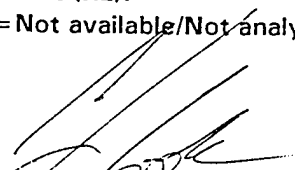
E = Extrapolated value

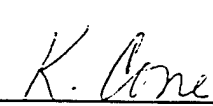
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

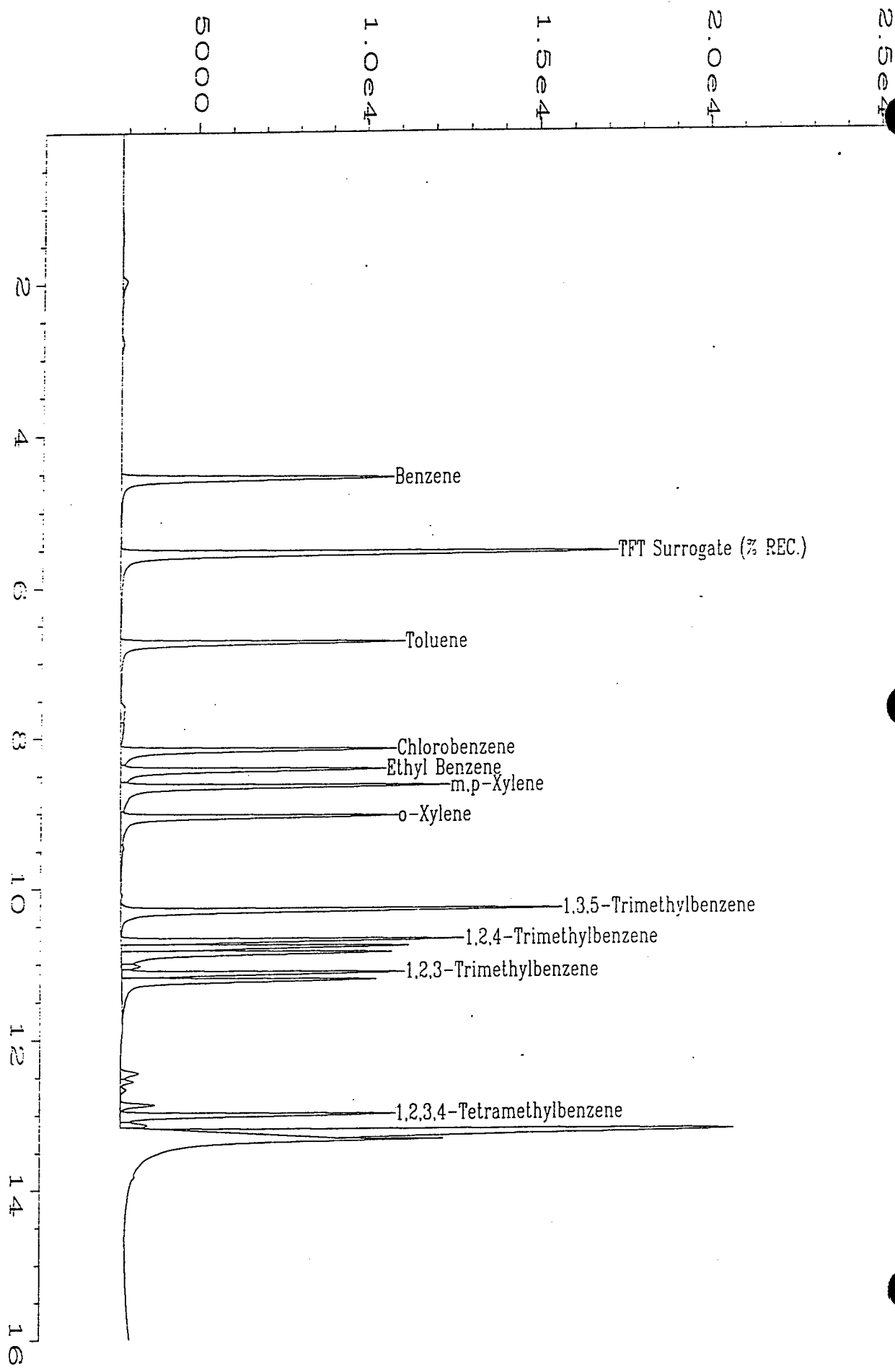
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.


Analyst


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Sig. 2 in C:\NHP\CHEM\2\DATA\1\BX20425\010R0101.D



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BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS042695 Dilution Factor : 1.00
Date Extracted/Prepared : 4/26/95 Method : 602
Date Analyzed : 4/26/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2042610

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.3	91.5	71.0-119.0*
Toluene	108-88-3	19.0	95.0	73.0-111.0*
Chlorobenzene	108-90-7	19.4	97	64.0-119.0*
Ethyl Benzene	100-41-4	19.5	97.5	75.0-114.0*
m,p-Xylene	108-38-3	21.4	107	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	19.2	96.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	21.7	109	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	20.3	102	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.5	103	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	19.7	98.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		104%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

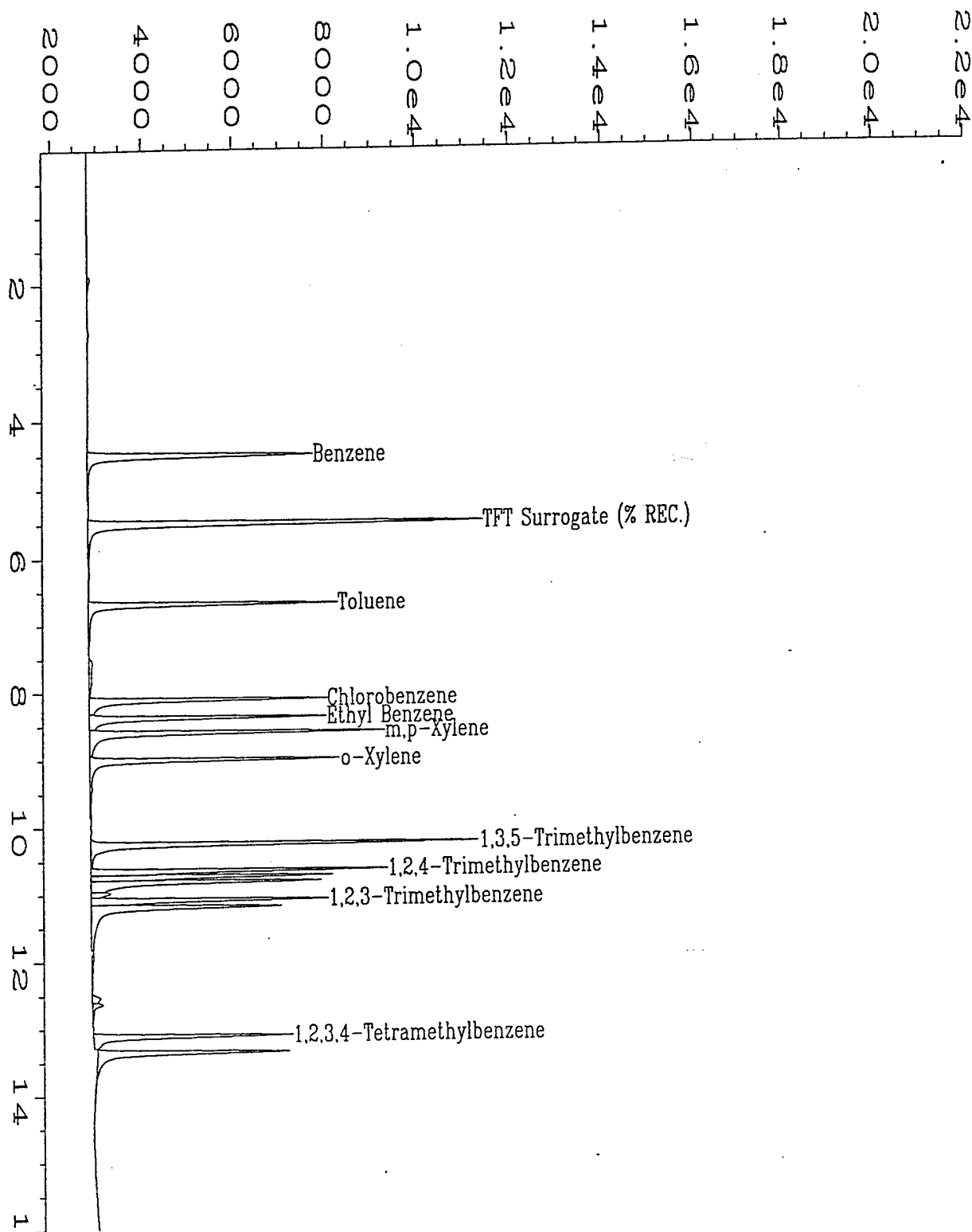
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

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Data File Name	: C:\HPCHEM\2\DATA\BX20426\010R1001.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS042695	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20426.MTH
Acquired on	: 26 Apr 95 02:41 PM	Analysis Method	: BX20426.MTH
Report Created on	: 26 Apr 95 06:59 PM	Sample Amount	: 0
Recalib on	: 26 APR 95 02:33 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: REF # 1667 - New LCS Mix		

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BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS042695 Dilution Factor : 1.00
Date Extracted/Prepared : 4/26/95 Method : 602
Date Analyzed : 4/26/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2042610

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	18.3	91.5	71.0-119.0*
Toluene	108-88-3	19.0	95.0	73.0-111.0*
Chlorobenzene	108-90-7	19.4	97	64.0-119.0*
Ethyl Benzene	100-41-4	19.5	97.5	75.0-114.0*
m,p-Xylene	108-38-3	21.4	107	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	19.2	96.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	21.7	109	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	20.3	102	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	20.5	103	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	19.7	98.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		104%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

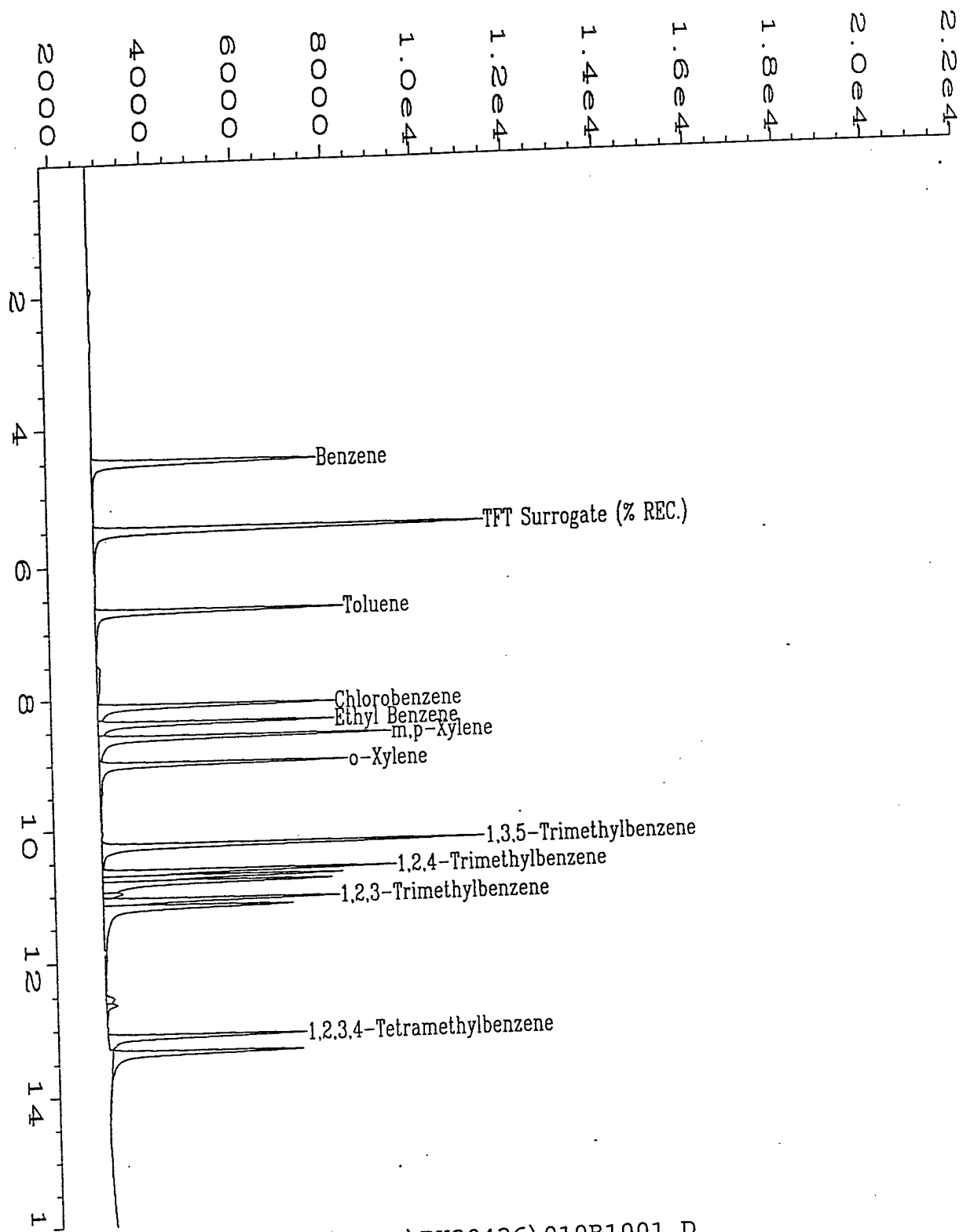
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

Analyst

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20426\010R1001.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS042695	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20426.MTH
Acquired on	: 26 Apr 95 02:41 PM	Analysis Method	: BX20426.MTH
Report Created on:	26 Apr 95 06:59 PM	Sample Amount	: 0
Int Recalib on	: 26 APR 95 02:33 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: REF # 1667 - New LCS Mix		

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(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 4/12,13/95	Client Project Number	: 722450.26020/SEYMORE
Date Received	: 4/14/95	Lab Project Number	: 95-1217
Date Prepared	: 4/26,27/95	Matrix	: Soil
Date Analyzed	: 4/26,27/95	Method Number	: EPA 5030/8015 Modified

Evergreen Sample #	Client Sample #	Surrogate Recovery	TVH* mg/Kg	RL* mg/Kg
MB042695	METHOD BLANK	100%	U	0.1
X05753	MW-6 15-16'	86%	U	0.13
X05755	MW-8 11-12'	97%	U	0.13
X05756	MW-9 15-16'	81%	U	0.12
X05757	MW-10 10-11'	88%	U	0.13
X05759	MW-11 11.5 13.5	83%	U	0.13
X05760C	SS-1 11.5-13.5	**	1000 E	5.5
X05760G	SS-1 11.5-13.5 DUP	**	6600 E	5.5
X05762	SS-1 16'-18'	94%	U	0.11
X05762 DUP	SS-1 16'-18'	86%	U	0.11
X05763	SS-2 11.5-13.5	105%	1.9	0.11
X05764C	SS-3 9-11	**	5200 E	5.4
X05764G	SS-3 9-11 DUP	**	2300 E	5.4

QUALIFIERS

U = TVH analyzed for but not detected.

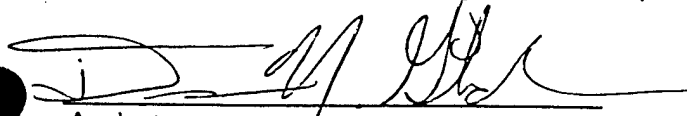
B = TVH found in blank also.

E = Extrapolated value.

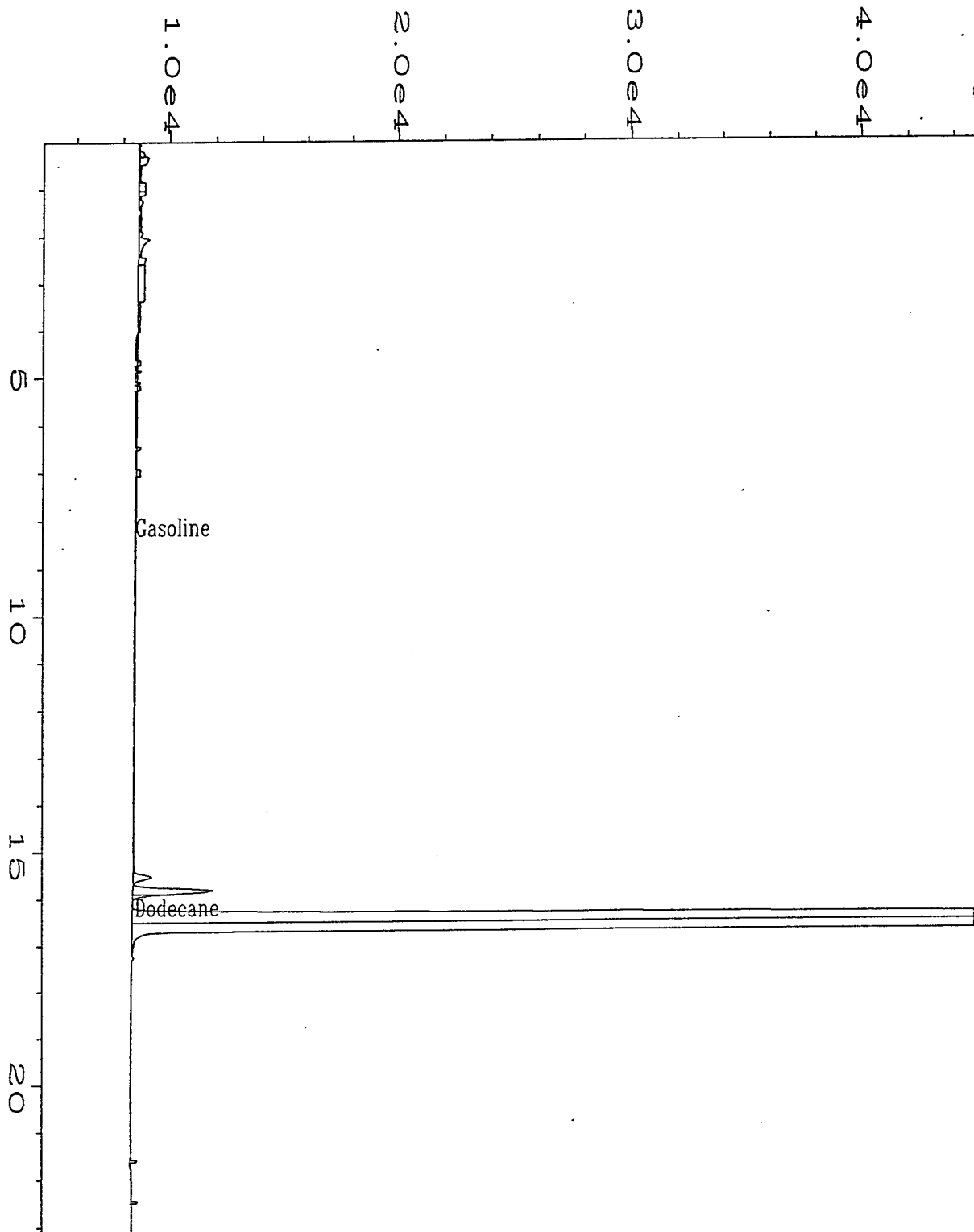
RL = Reporting Limit.

* = Based on dry-weight.

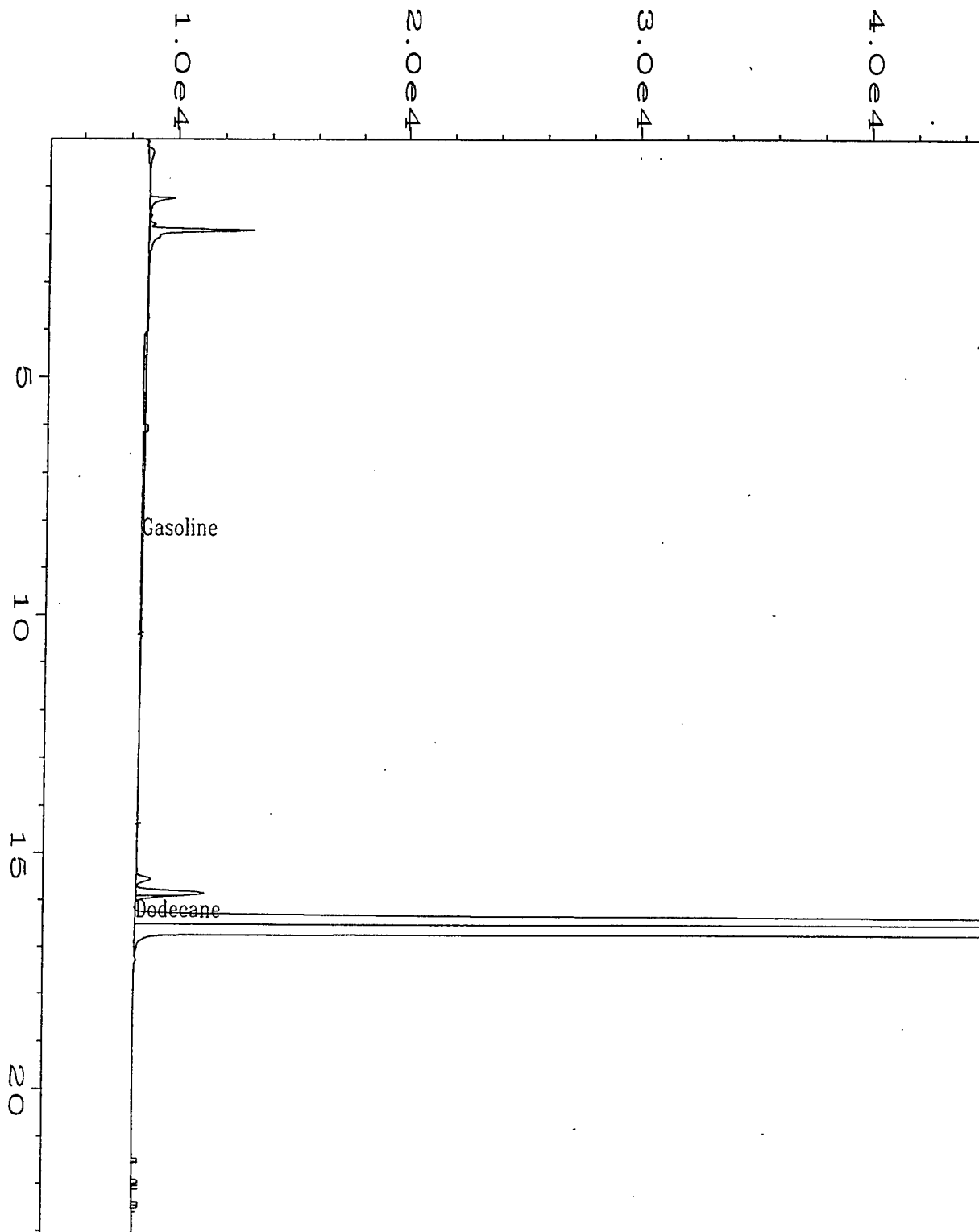
** = Unable to separate surrogate from analyte.


Analyst


Approved

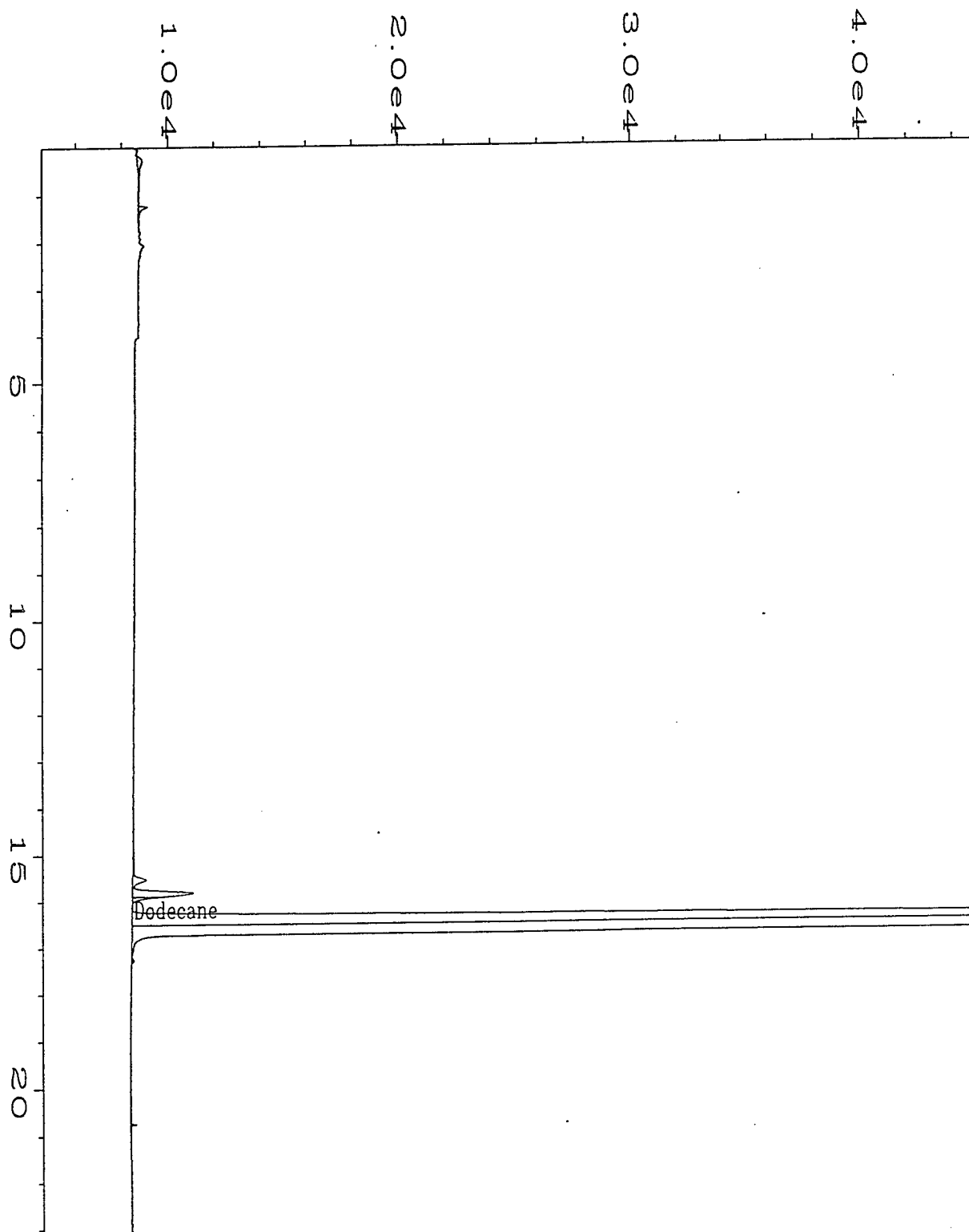


Data File Name	: C:\HPCHEM\1\DATA\TVH0426\009F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 9
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB042695	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BAS M
Acquired on	: 26 Apr 95 06:46 PM	Analysis Method	: TVH042 T
Port Created on:	26 Apr 95 07:12 PM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 1		

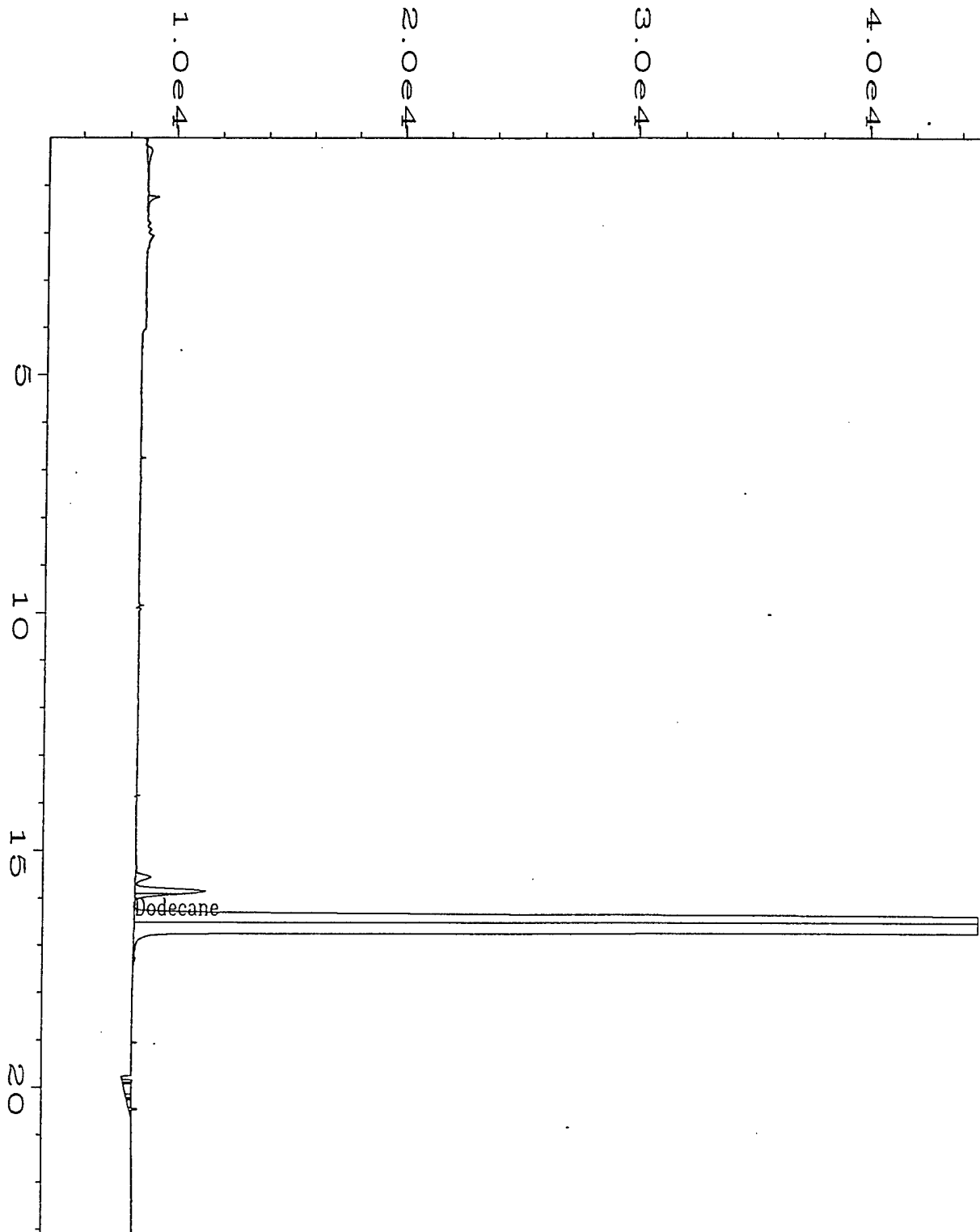


Data File Name	: C:\HPCHEM\1\DATA\TVH0426\010F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 10
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05753;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 26 Apr 95 07:22 PM	Analysis Method	: TVH0426.MTH
Report Created on:	: 27 Apr 95 10:27 AM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 1		

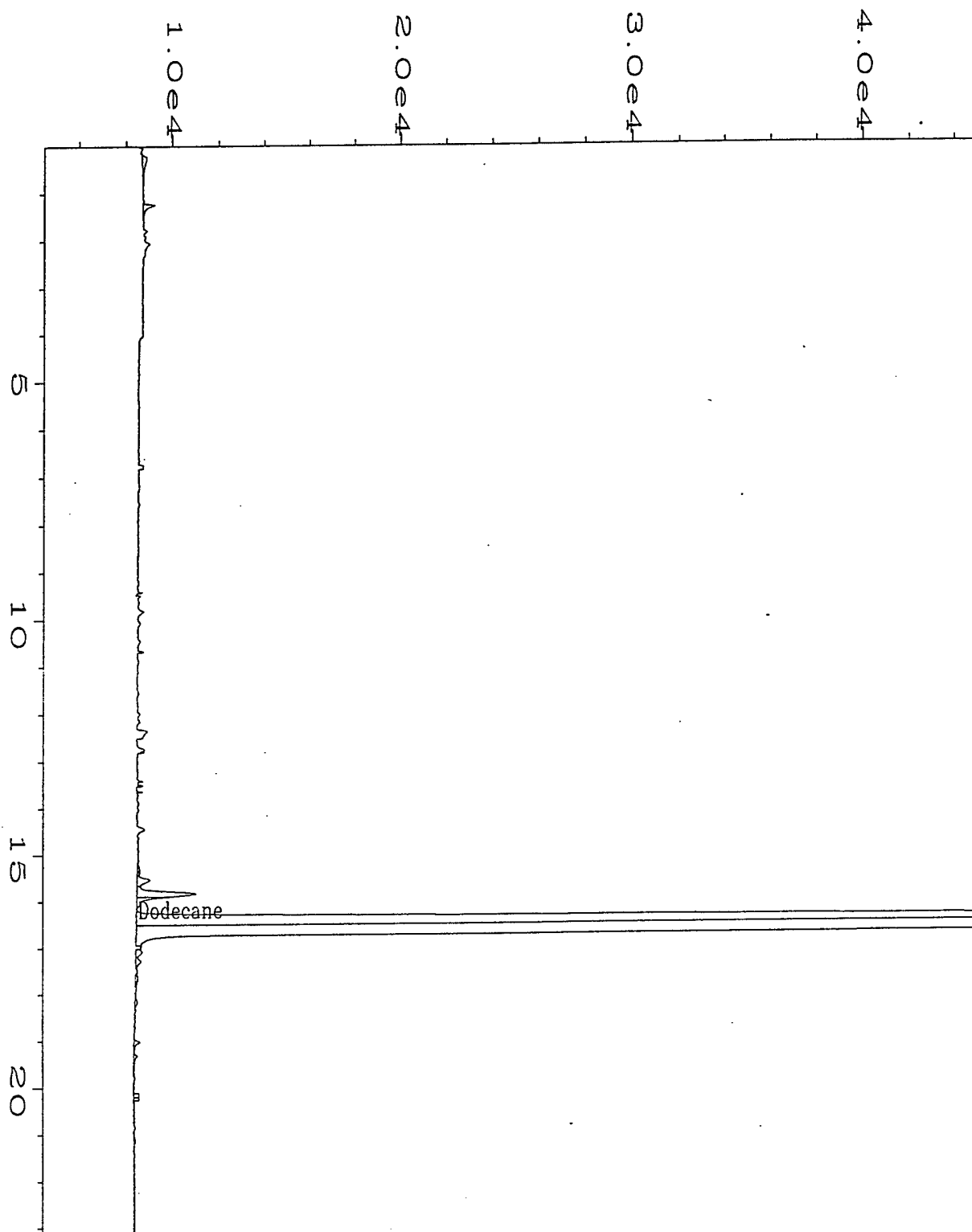
MW-6 15.16'



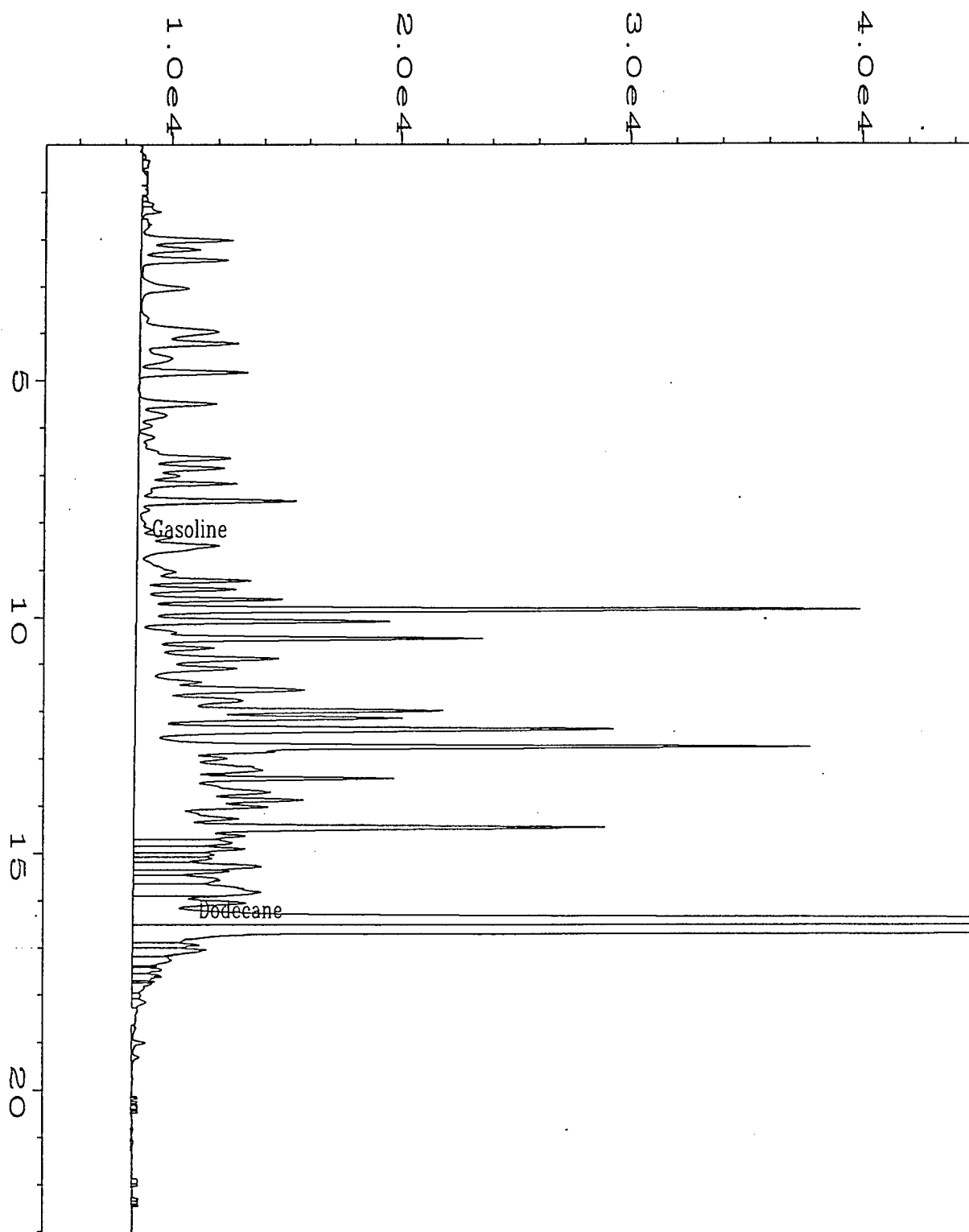
Data File Name	: C:\HPCHEM\1\DATA\tvh0426\011F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 11
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05755;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.M
Acquired on	: 26 Apr 95 07:58 PM	Analysis Method	: TVH041.M
Report Created on:	: 27 Apr 95 10:20 AM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # MW-8 11-12' SOIL		



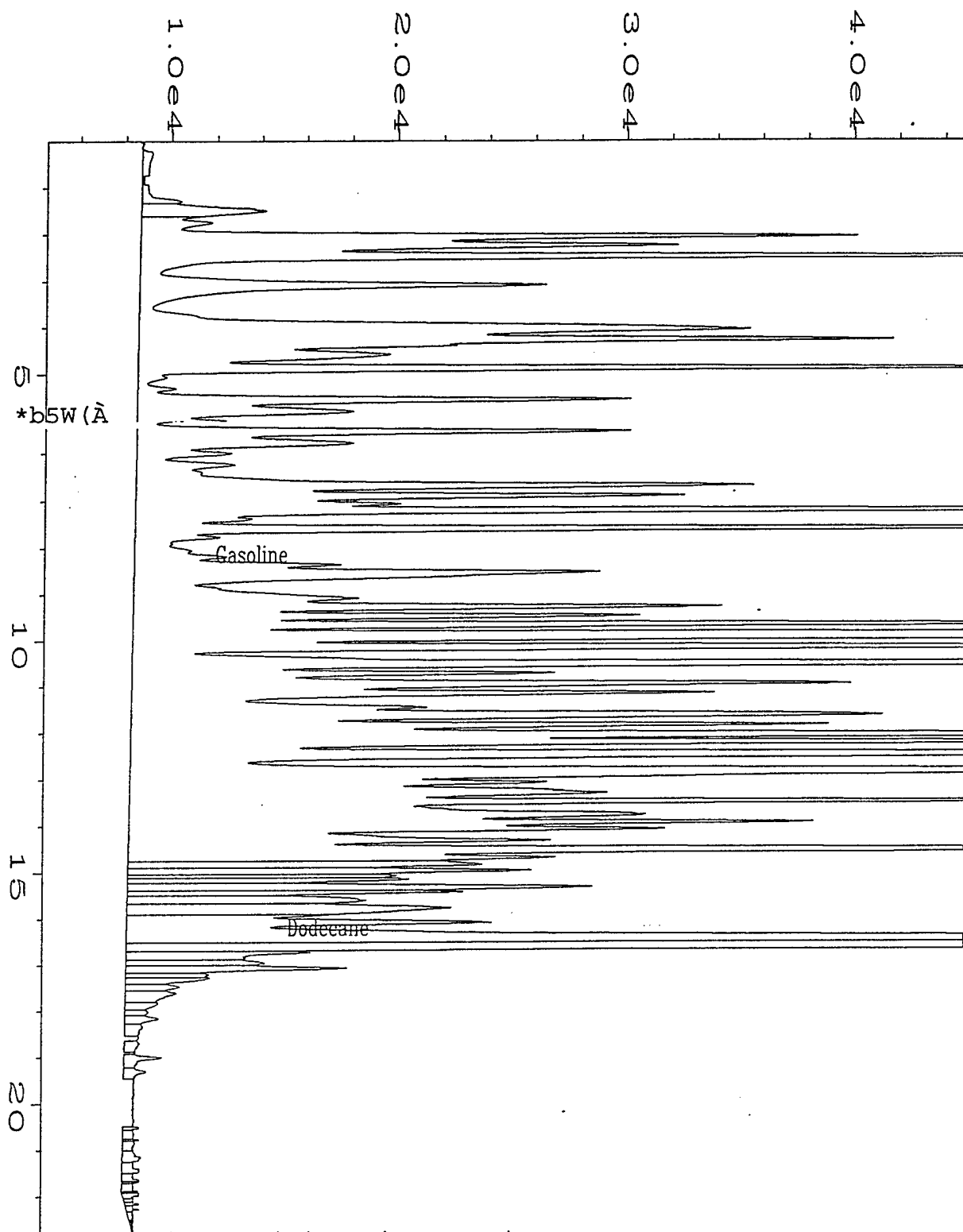
Data File Name	: C:\HPCHEM\1\DATA\tvh0426\012F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 12
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05756;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MTH
Acquired on	: 26 Apr 95 08:34 PM	Analysis Method	: TVH0426.MTH
Report Created on:	27 Apr 95 10:20 AM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # MW-9 15-16' SOIL		



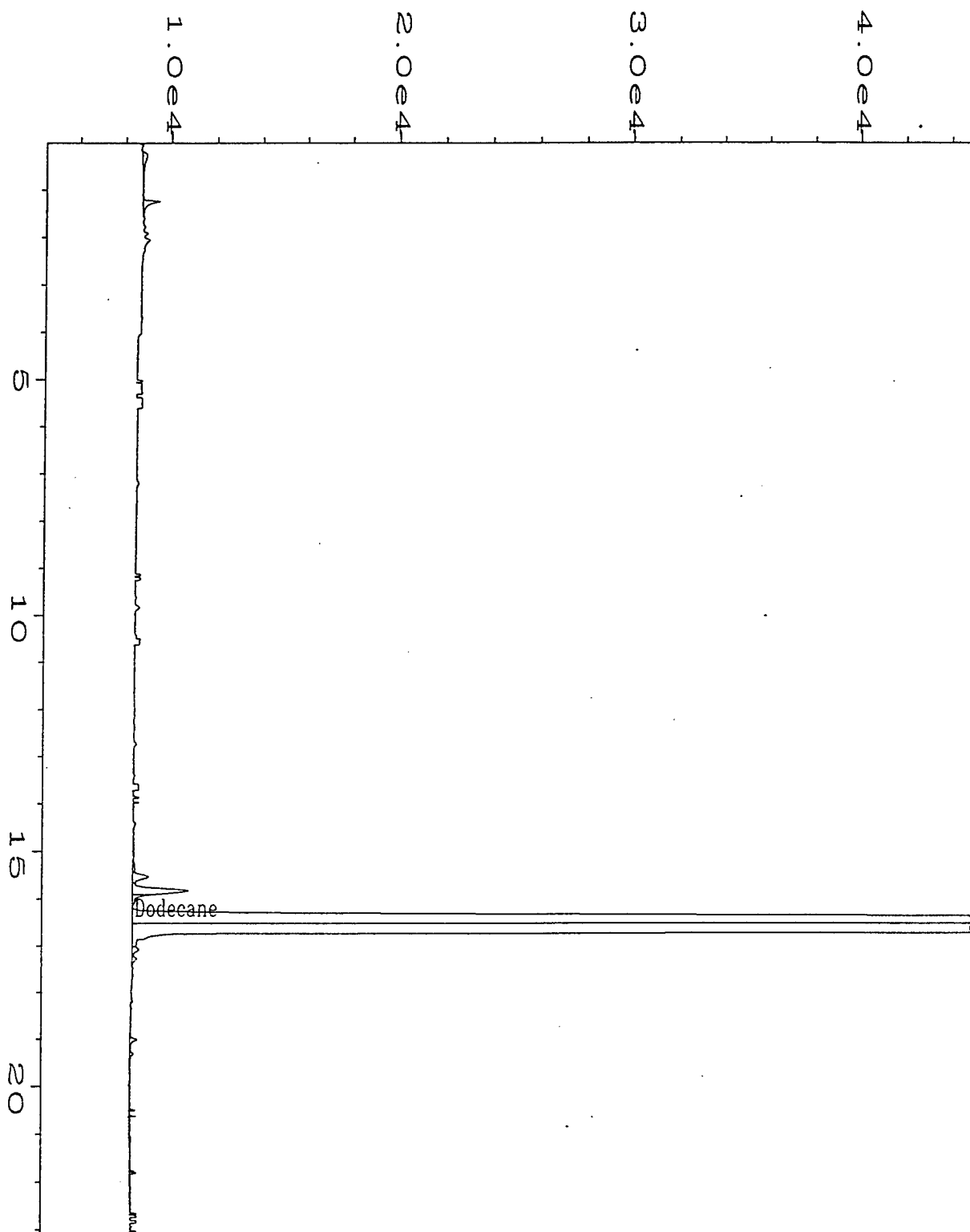
Data File Name	: C:\HPCHEM\1\DATA\tvh0426\014F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 14
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05759;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.M
Acquired on	: 26 Apr 95 09:46 PM	Analysis Method	: TVH042.T
Report Created on:	27 Apr 95 10:20 AM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # MW-11 11.5-13.5 SOIL		



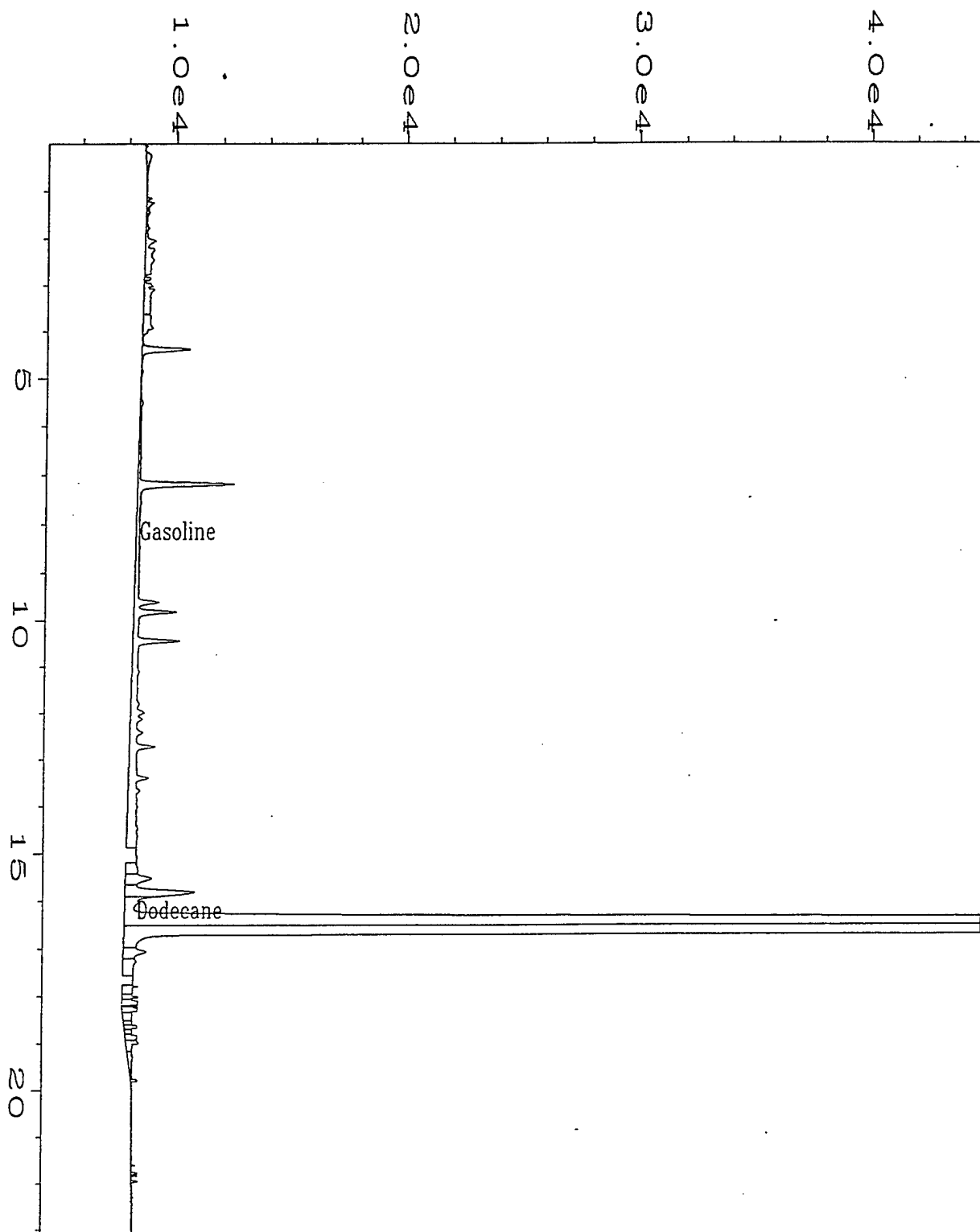
Data File Name	: C:\HPCHEM\1\DATA\tvh0426\017F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 17
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05760C;50;.1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 26 Apr 95 11:34 PM	Analysis Method	: TVH0426.MTH
Report Created on:	: 27 Apr 95 10:21 AM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 50		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 SOIL		



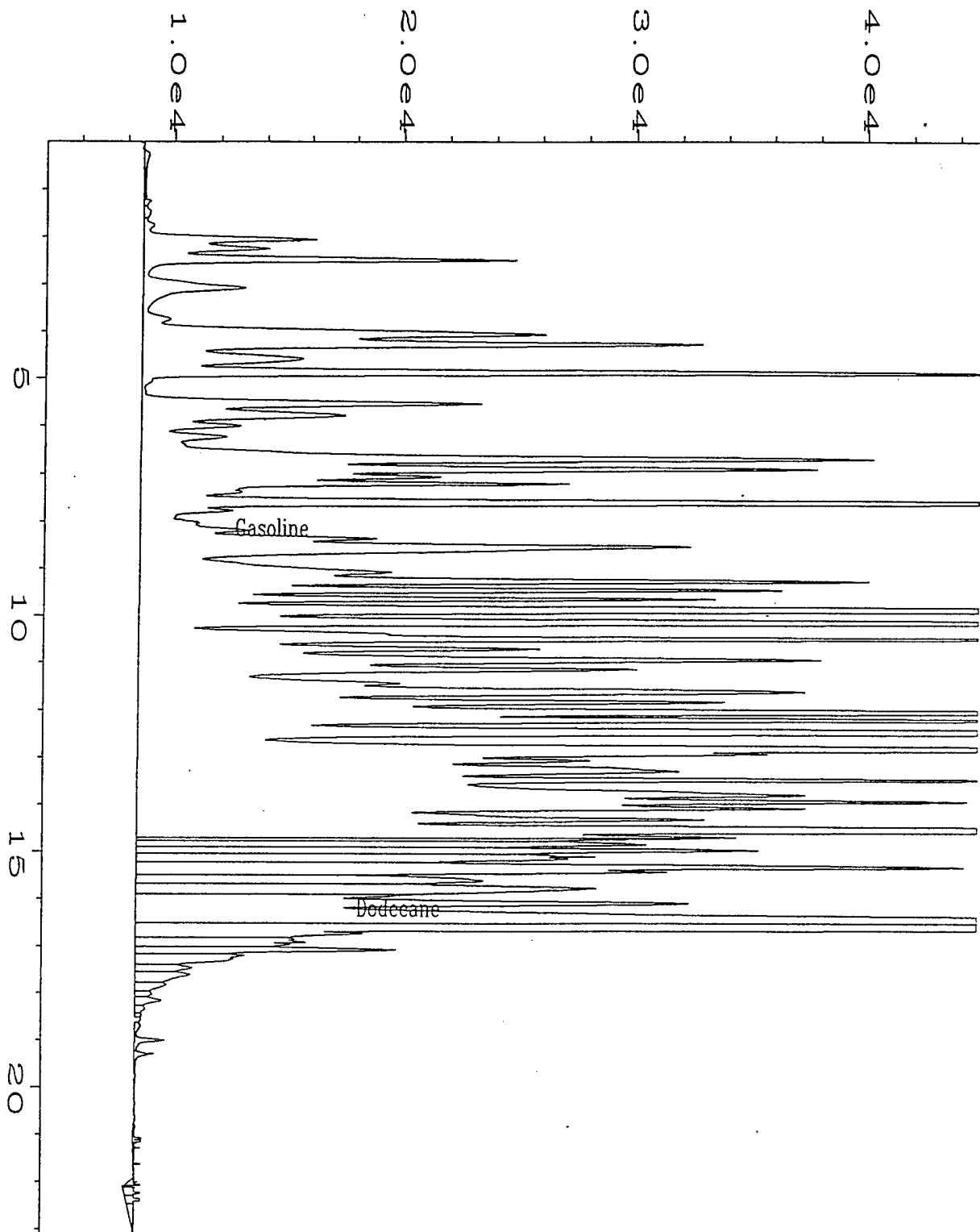
Data File Name	: C:\HPCHEM\1\DATA\tvh0426\018F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 18
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05760G;50;.1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BA
Acquired on	: 27 Apr 95 00:10 AM	Analysis Method	: TVH0426
Port Created on:	27 Apr 95 10:21 AM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 50		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 DUP SOIL		



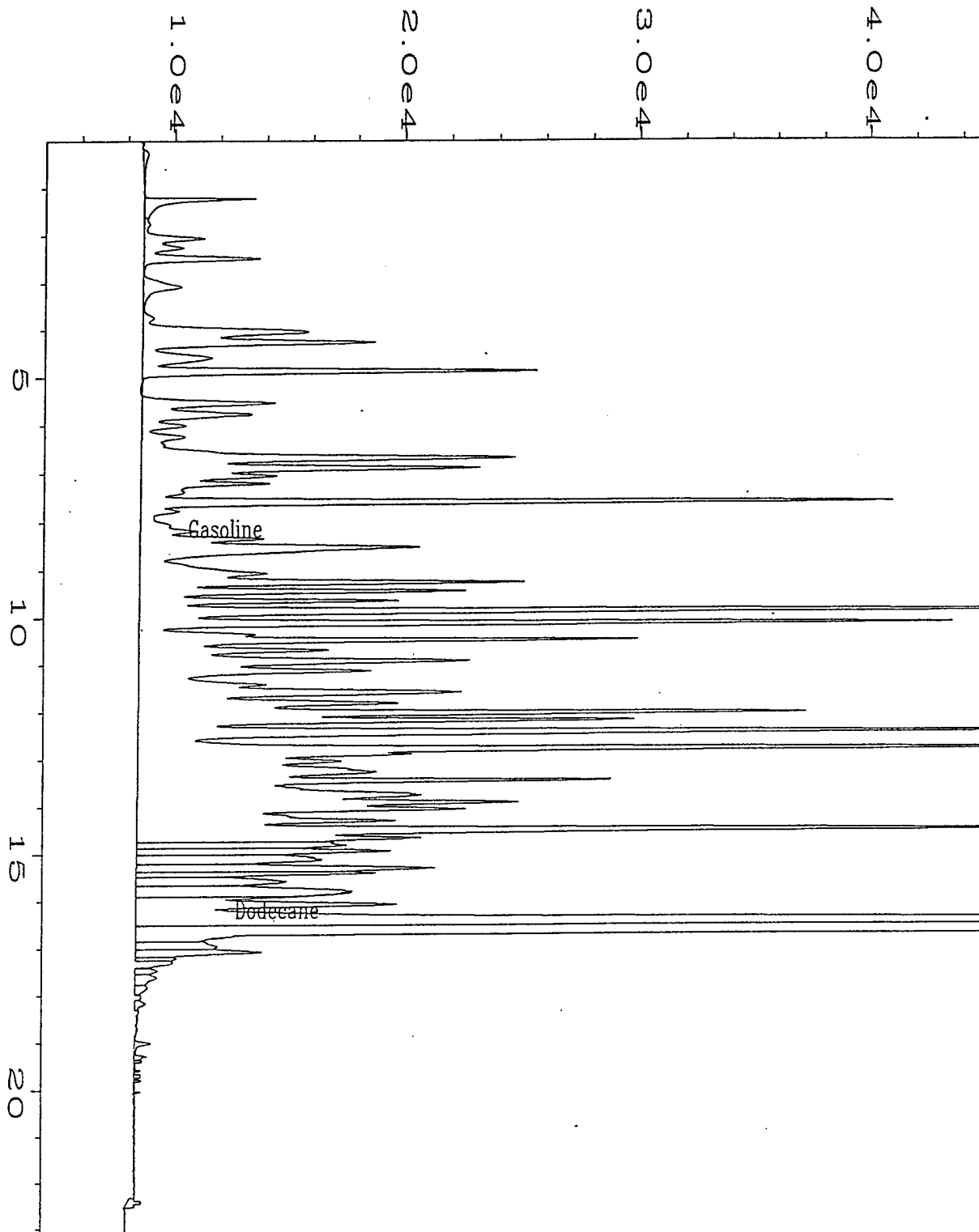
Data File Name	: C:\HPCHEM\1\DATA\tvh0426\019F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 19
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05762;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MTH
Required on	: 27 Apr 95 00:46 AM	Analysis Method	: TVH0426.MTH
Report Created on:	27 Apr 95 10:21 AM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 16'-18' SOIL		



Data File Name	: C:\HPCHEM\1\DATA\tvh0426\021F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 21
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05763;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BAS.M
Acquired on	: 27 Apr 95 01:58 AM	Analysis Method	: TVH0426.T
Report Created on:	27 Apr 95 10:22 AM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-2 11.5-13.5 SOIL		



Data File Name	: C:\HPCHEM\1\DATA\tvh0426\022F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 22
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05764C;50;.1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 27 Apr 95 02:34 AM	Analysis Method	: TVH0426.MTH
Report Created on:	: 27 Apr 95 10:22 AM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 50		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-3 9-11 SOIL		



Data File Name	: C:\HPCHEM\1\DATA\tvh0426\023F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 23
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05764G;50;.1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BAS.M
Acquired on	: 27 Apr 95 03:10 AM	Analysis Method	: TVH042.M
Report Created on:	27 Apr 95 10:22 AM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 50		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-3 9-11 DUP SOIL		

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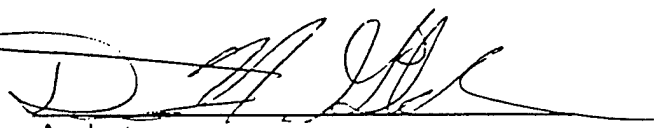
TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

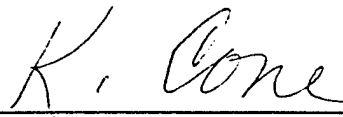
LCS Number : LCS042695 Matrix : SOIL
Date Prepared : 4/26/95 Method Numbers : EPA 5030/8015 Modified
Date Analyzed : 4/26/95
Sequence Number : TVH8

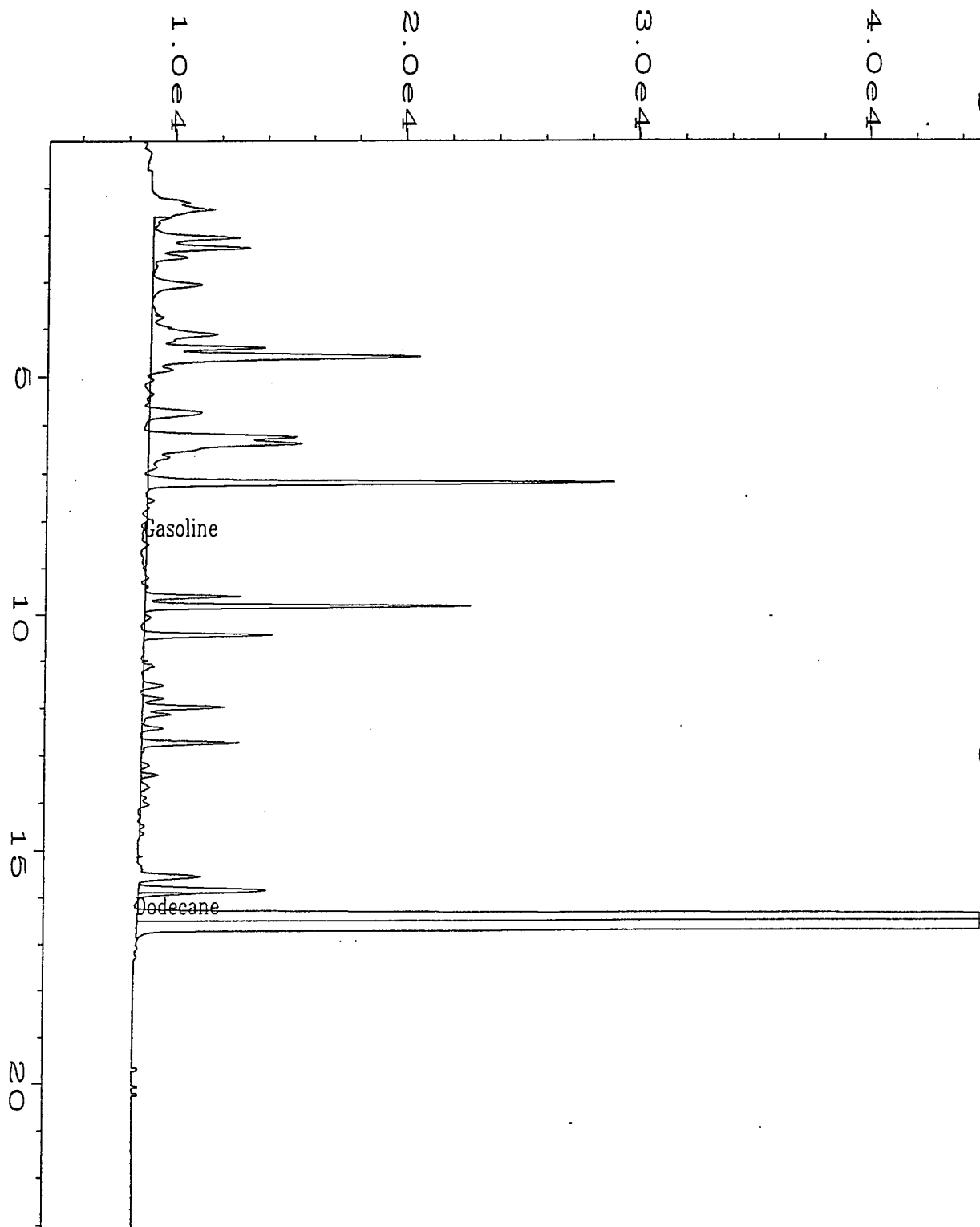
<u>Compound Name</u>	<u>Theoretical Concentration mg/kg</u>	<u>LCS Concentration mg/kg</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	5.00	5.70	114%	70%-130%

QUALIFIERS

U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\TVH0426\008F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 8
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS042695	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.M
Acquired on	: 26 Apr 95 06:10 PM	Analysis Method	: TVH0426.M
Report Created on:	26 Apr 95 06:47 PM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 1		

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TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No. : MW-11 11.5 13.5 Client Project No. : 722450.26020
Lab Sample No. : X05759 Lab Project No. : 95-1217
Date Sampled : 4/13/95 EPA Method No. : 5030/8015 Modified
Date Received : 4/14/95 Matrix : SOIL
Date Prepared : 4/27/95 Method Blank : MB042695
Date Analyzed : 4/27/95

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	0.00	2.10	105%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	2.00	1.76	88%	18	50	60-140

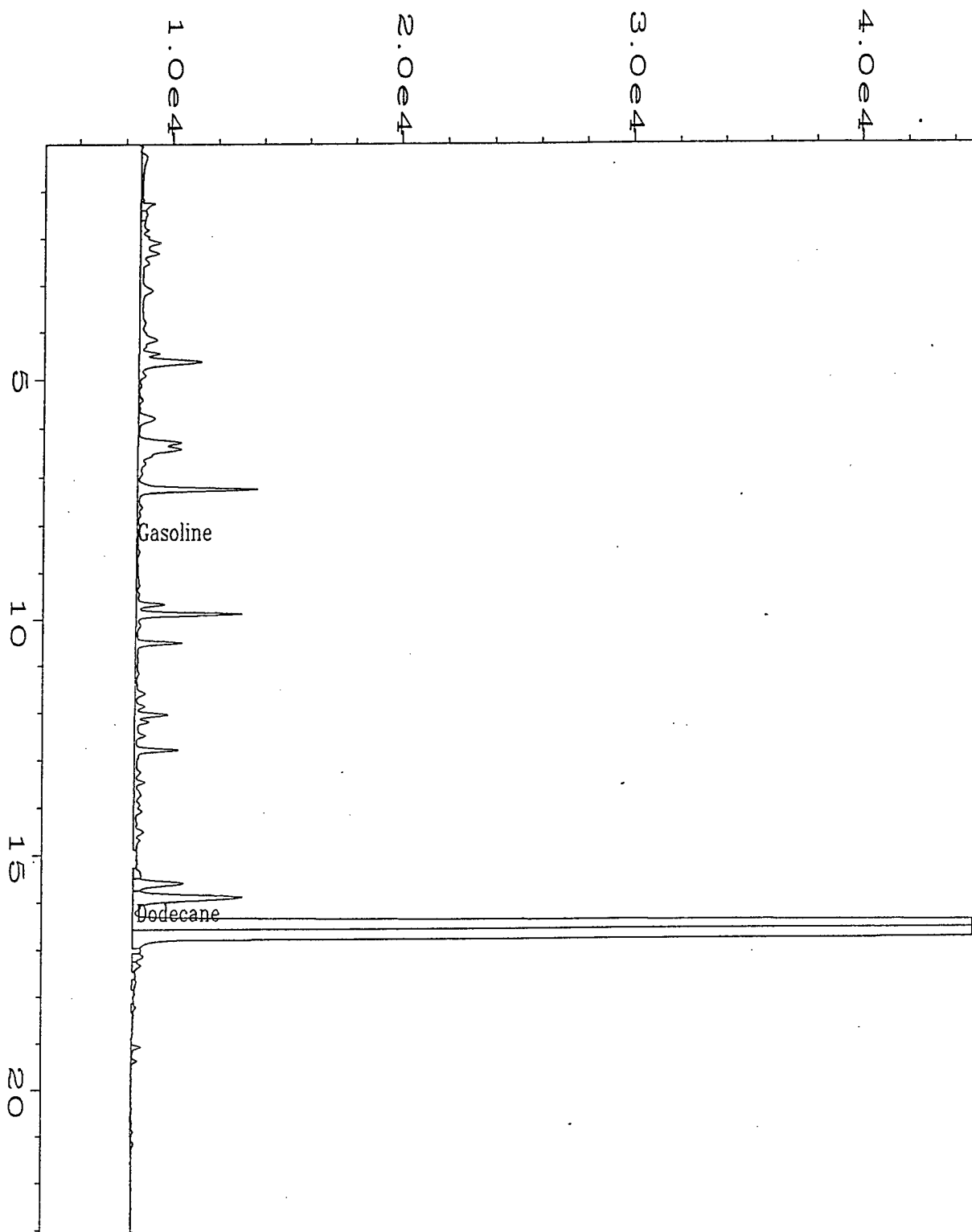
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.
Spike Recovery: 0 out of (2) outside limits.

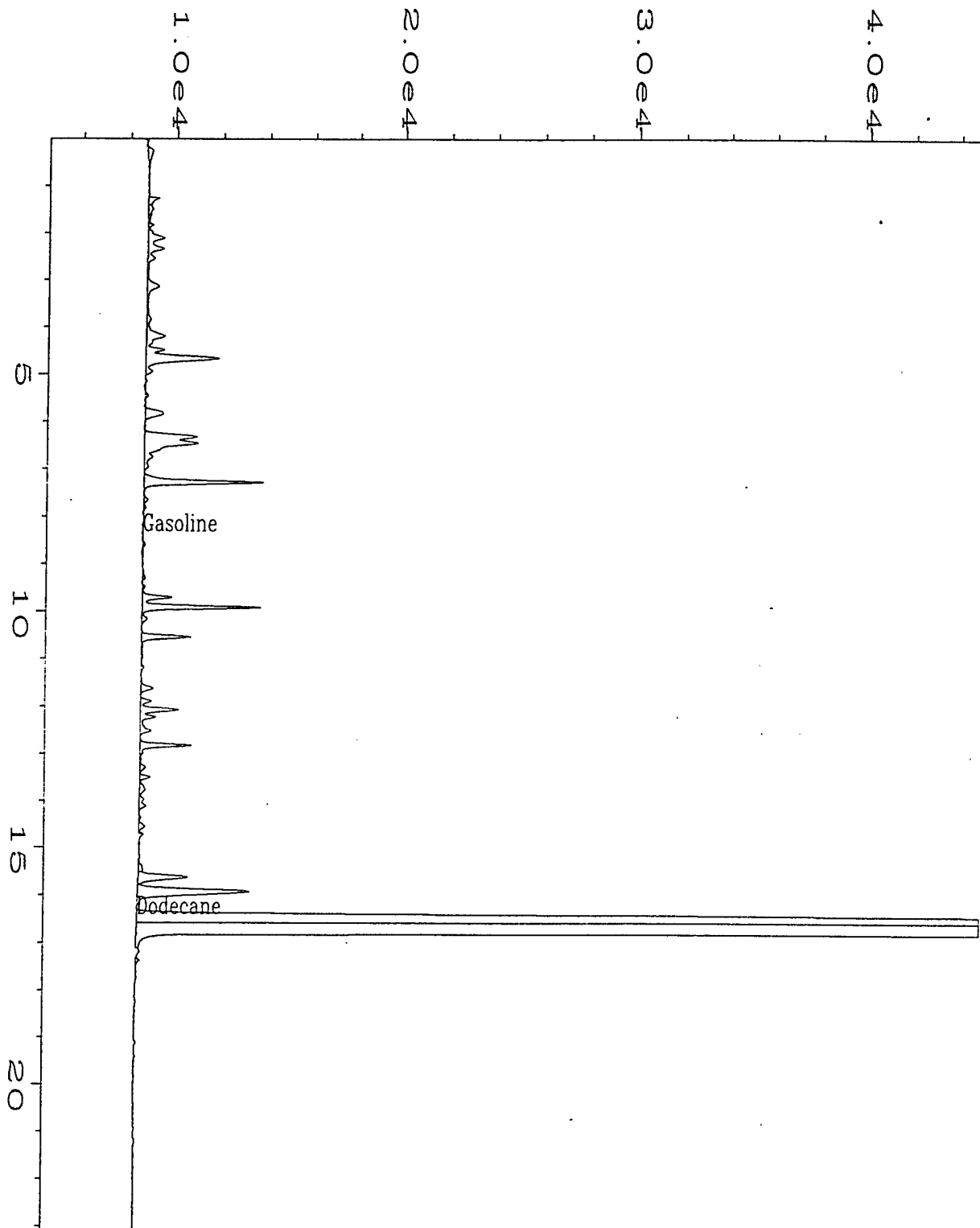
NA = Not analyzed/not applicable.

WJM 5/3/95

Comments:



Data File Name	: C:\HPCHEM\1\DATA\tvh0426\037F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 37
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05759 MS	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BA M
Acquired on	: 27 Apr 95 05:02 PM	Analysis Method	: TVH042 MT
Report Created on	: 28 Apr 95 08:00 AM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 1		



Data File Name	: C:\HPCHEM\1\DATA\TVH0426\033F0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 33
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05759 MSD	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Required on	: 27 Apr 95 02:38 PM	Analysis Method	: TVH0426.MTH
Report Created on:	27 Apr 95 03:14 PM	Sample Amount	: 0
Last Recalib on	: 26 APR 95 06:00 PM	ISTD Amount	:
Multiplier	: 1		

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TOTAL EXTRACTABLE HYDROCARBONS (TEH)
JET FUEL

Date Sampled	: 4/12,13/95	Client Project Number	: 722450.26020/SEYMORE
Date Received	: 4/14/95	Lab Project Number	: 95-1217
Date Prepared	: 4/17,21/1995	Matrix	: Soil
Date Analyzed	: 4/19,20,24/95	Method Number	: 3500/Mod. 8015

Evergreen Sample #	Client Sample #	OTP Surrogate % Recovery	TEH* Jet Fuel mg/Kg	RL* mg/Kg
SB041795	SOIL METHOD BLANK	97%	U	10
X05753	MW-6 15-16'	85%	U	13
X05755	95-MW-8 11-12'	88%	U	13
X05756	MW-9 15-16'	90%	U	12
X05757	MW-10 10-11'	95%	U	13
X05759	MW-11 11.5-13.5	87%	U	13
X05760 D	SS-1 11.5-13.5	**	2600	110
X05760 H	SS-1 11.5-13.5 DUP	**	3200	110
X05762	SS-1 16'-18'	90%	U	11
X05763	SS-2 11.5-13.5	84%	U	11
X05764	SS-3 9-11	**	4100	110
SB042195	SOIL METHOD BLANK	100%	U	10
X05764 DUP	SS-3 9-11	118%	4800	11

OTP Soil Surrogate % Recovery limits: 60% - 118%

QUALIFIERS

U = TEH analyzed for but not detected.

B = TEH found in blank as well as sample (blank data should be compared).

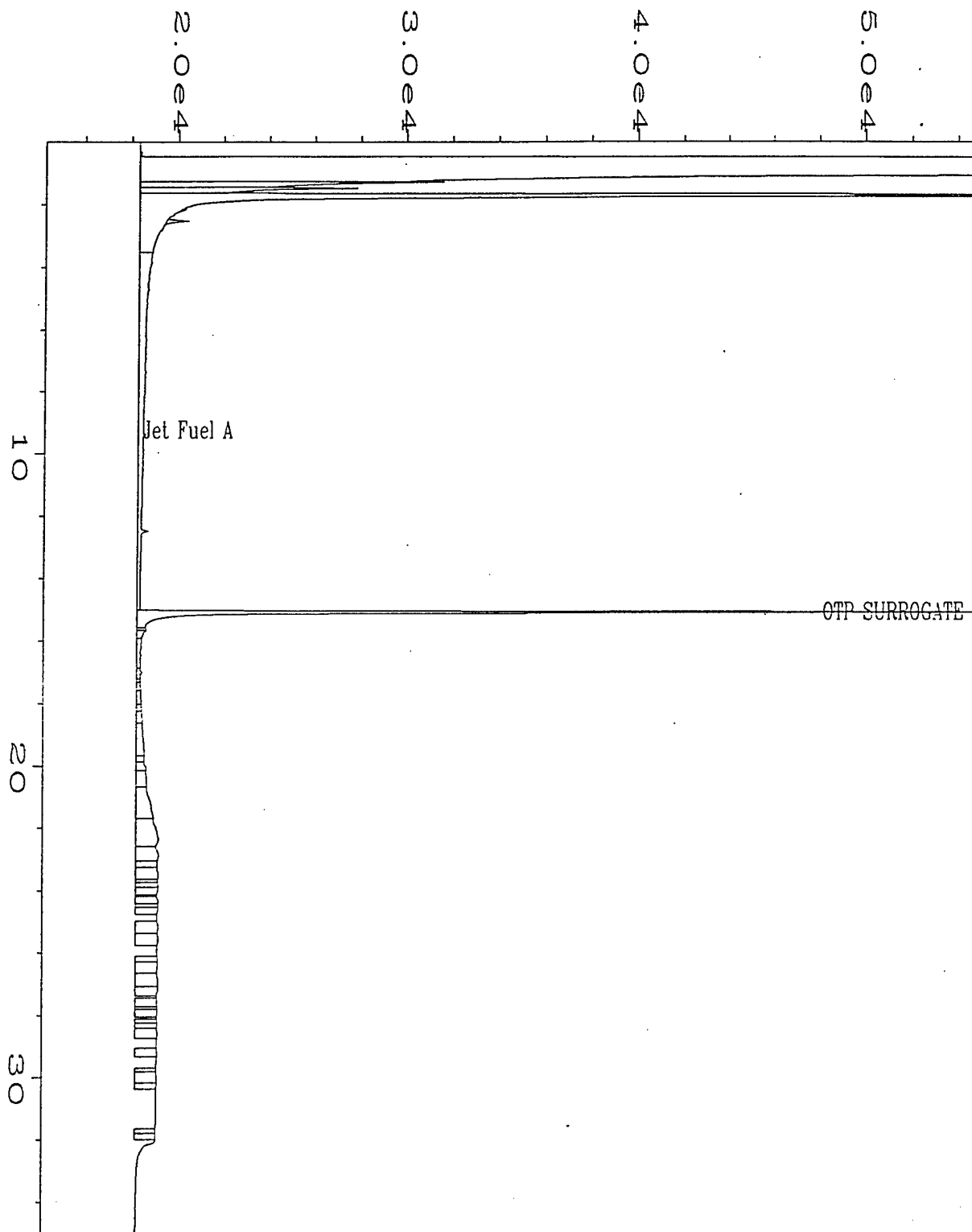
RL = Reporting Limit

** = Diluted out.

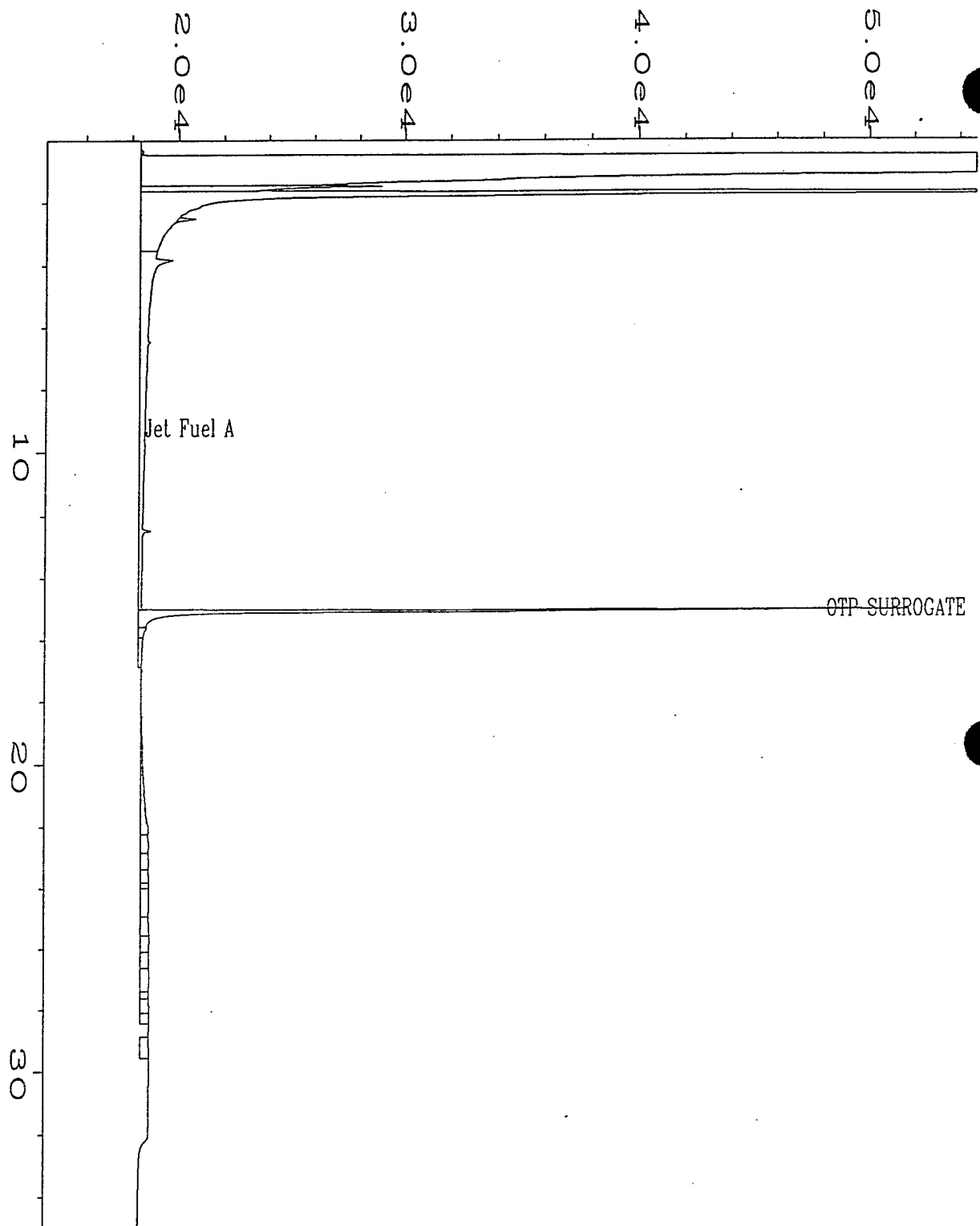
* = Based on dry weight.

Analyst

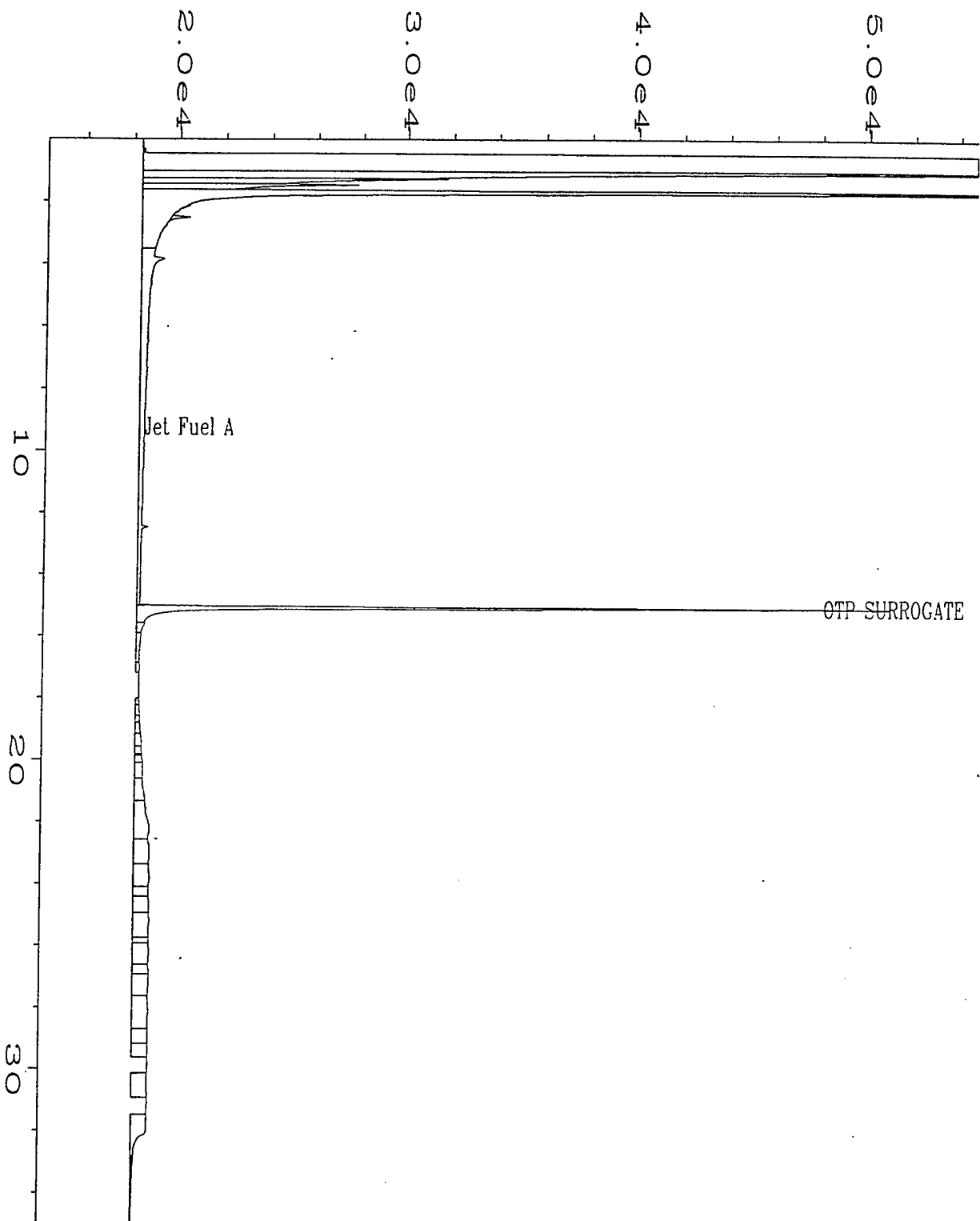
Approved



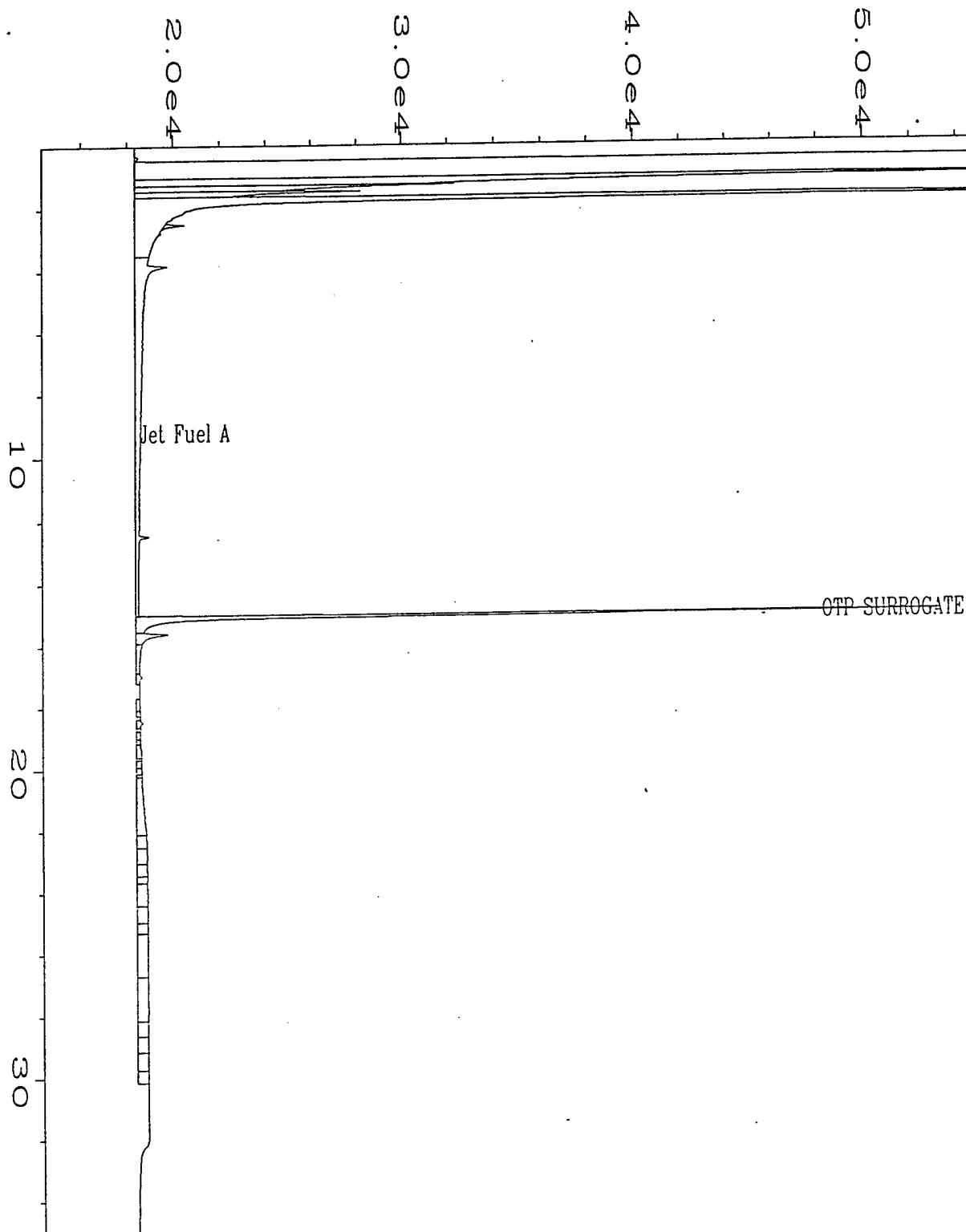
Data File Name	: C:\HPCHEM\2\DATA\JET0418\020R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 20
Instrument	: TEH	Injection Number	: 1
Sample Name	: SB041795	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 19 Apr 95 01:26 AM	Analysis Method	: JET0418.MTH
Report Created on	: 19 Apr 95 10:17 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		



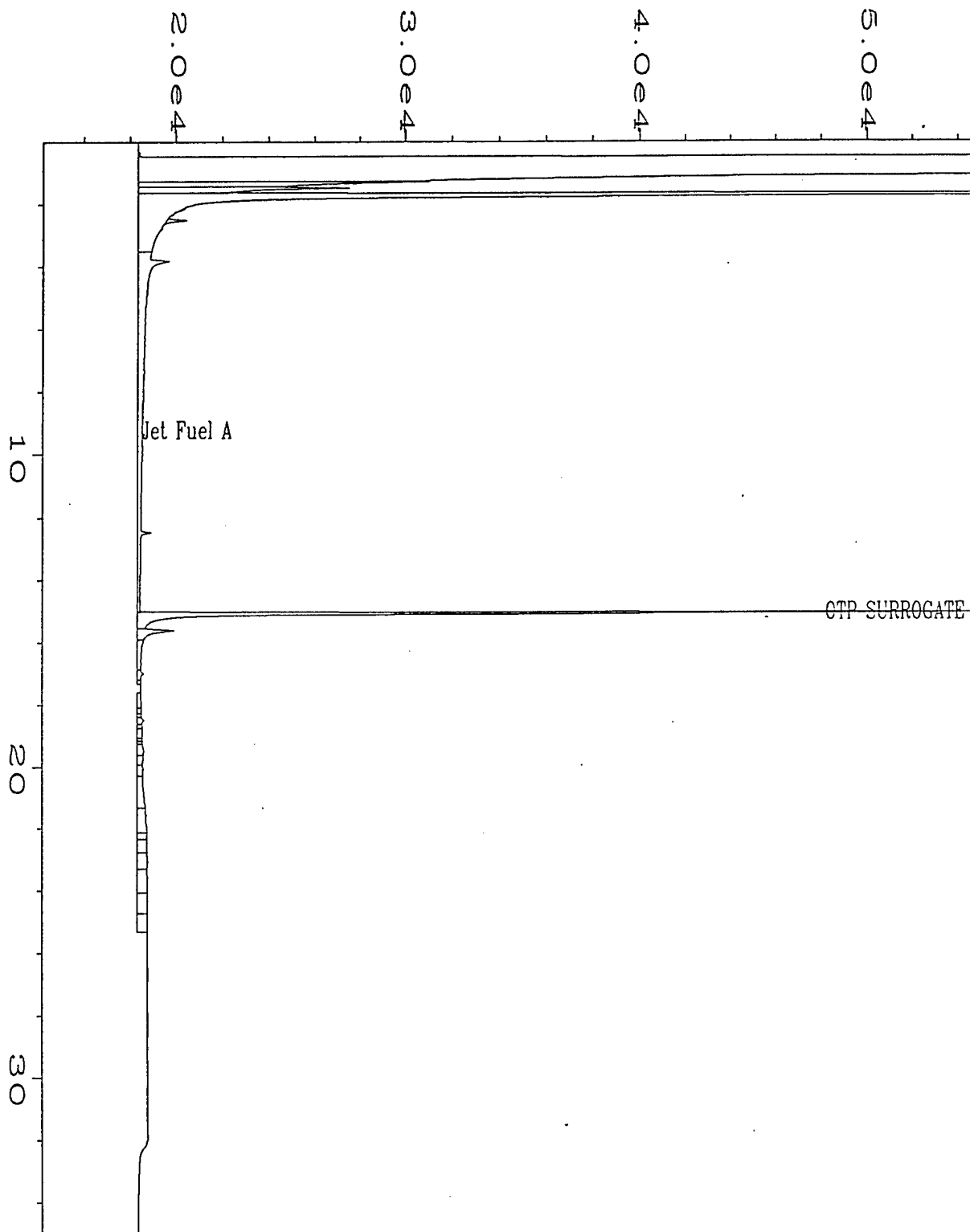
Data File Name	: C:\HPCHEM\2\DATA\JET0418\025R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 25
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05753 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1B.M
Acquired on	: 19 Apr 95 05:17 AM	Analysis Method	: JET0418.M
Report Created on:	: 19 Apr 95 10:18 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # MW-6 15-16' SOIL		



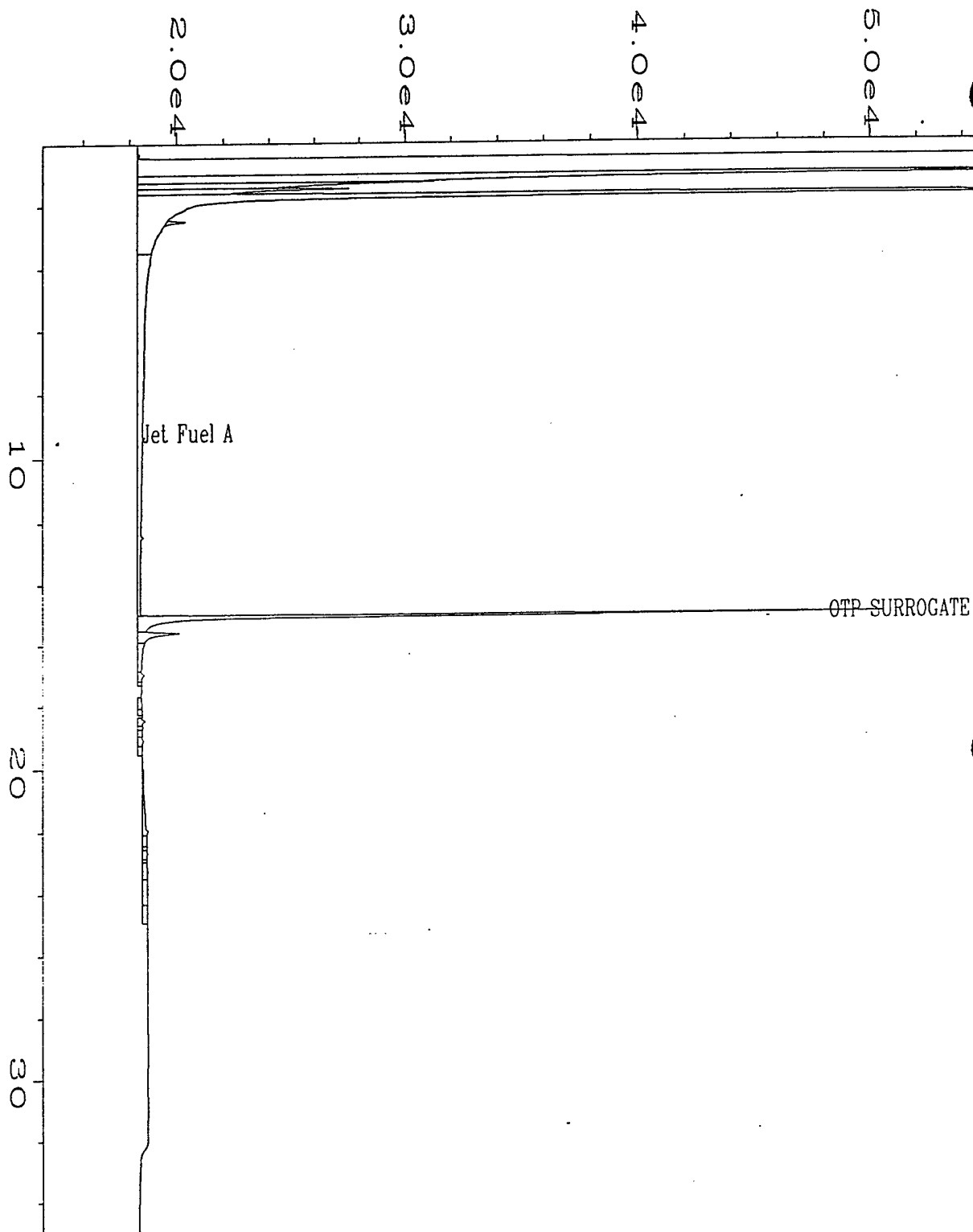
Data File Name	: C:\HPCHEM\2\DATA\JET0418\022R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 22
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05755 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1BASE.MTH
Acquired on	: 19 Apr 95 02:58 AM	Analysis Method	: JET0418.MTH
Report Created on:	19 Apr 95 10:17 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # 95-MW-8 11-12' SOIL		



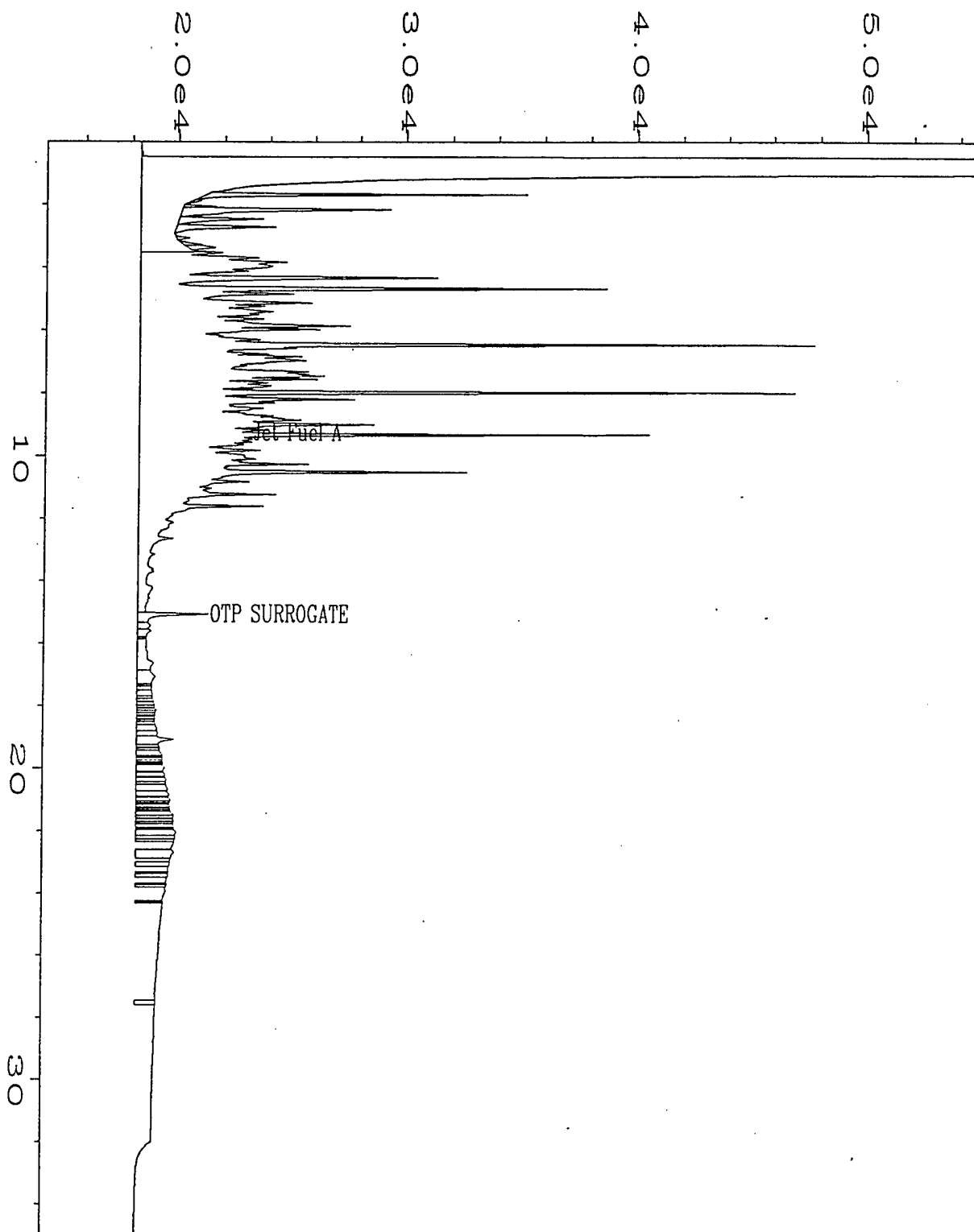
Data File Name	: C:\HPCHEM\2\DATA\JET0418\026R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 26
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05756 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BACT.1
Required on	: 19 Apr 95 06:03 AM	Analysis Method	: JET0418.M
Report Created on	: 19 Apr 95 10:18 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # MW-915-16' SOIL		



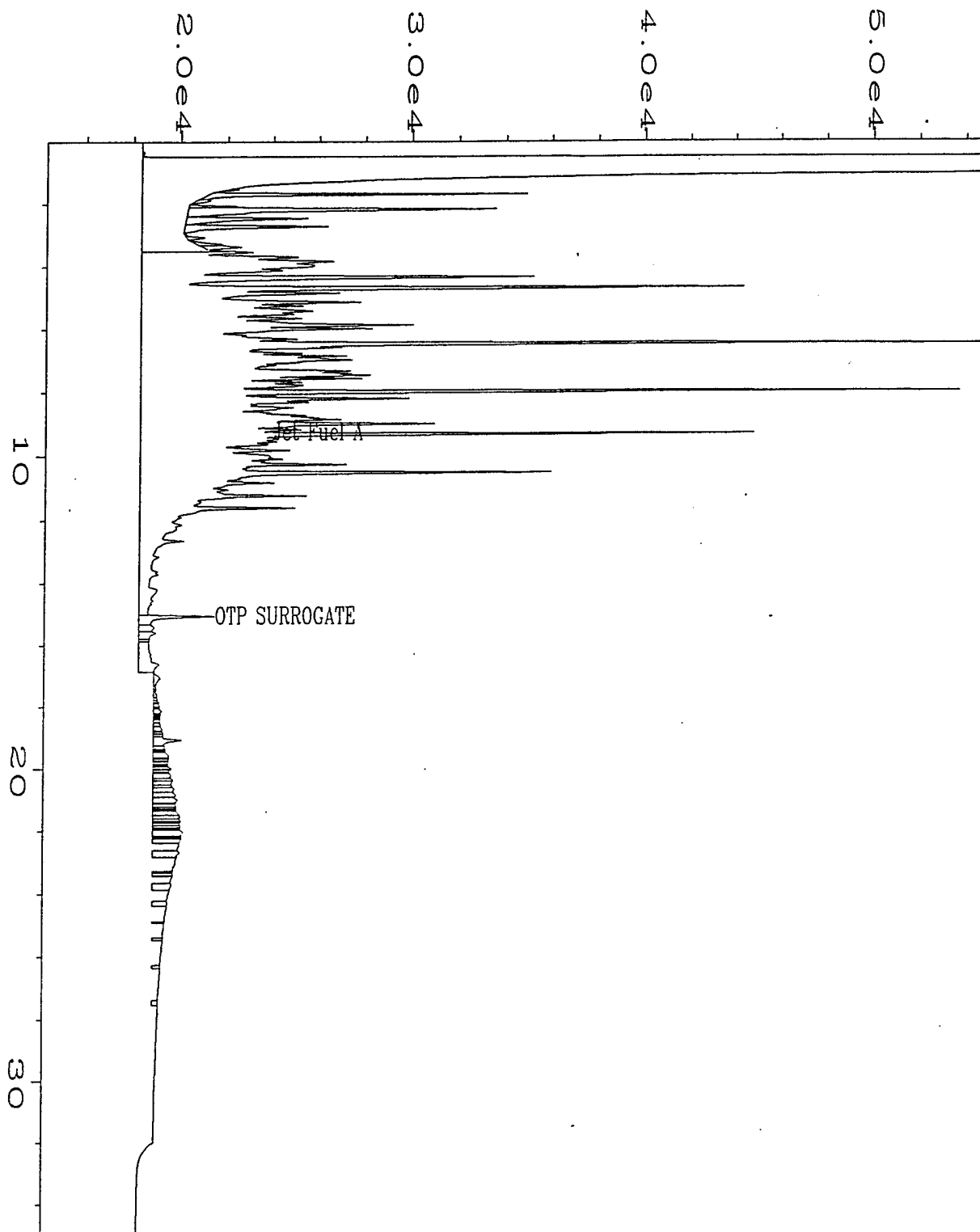
Data File Name	: C:\HPCHEM\2\DATA\JET0418\027R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 27
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05757 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1BASE.MTH
Acquired on	: 19 Apr 95 06:50 AM	Analysis Method	: JET0418.MTH
Report Created on:	19 Apr 95 10:18 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # MW-10 10-11' SOIL		



Data File Name	: C:\HPCHEM\2\DATA\JET0418\028R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 28
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05759 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BA
Required on	: 19 Apr 95 07:36 AM	Analysis Method	: JET04
Report Created on	: 19 Apr 95 10:18 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # MW-11 11.5-13.5 SOIL		

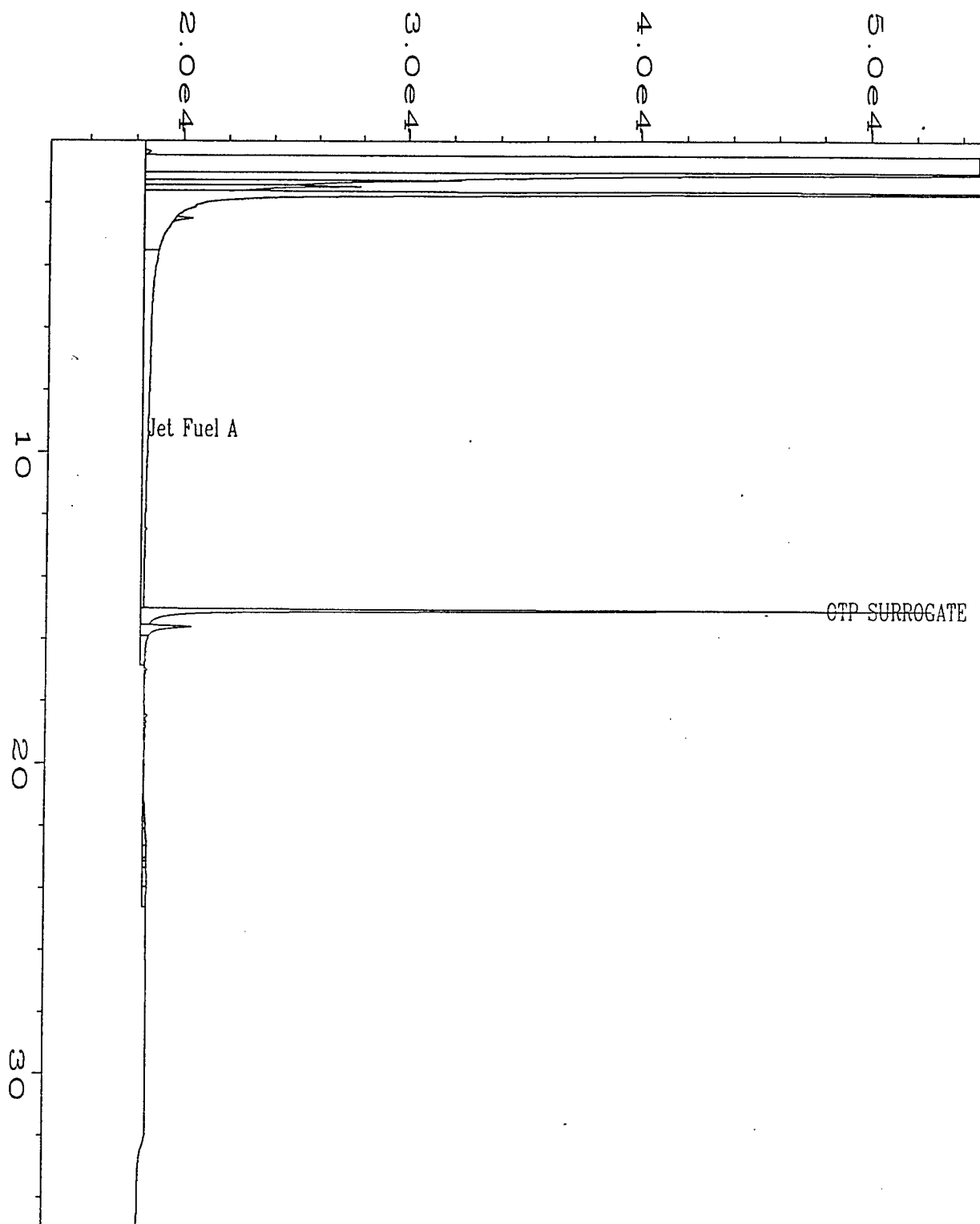


Data File Name	: C:\HPCHEM\2\DATA\JET0418\039R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 39
Instrument	: TEH	Injection Number	: 1
Sample Name	: X057600DF=10	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1BASE.MTH
Acquired on	: 19 Apr 95 05:04 PM	Analysis Method	: JET0418.MTH
Report Created on:	20 Apr 95 09:24 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 10		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 11.5-13.5 SOIL		

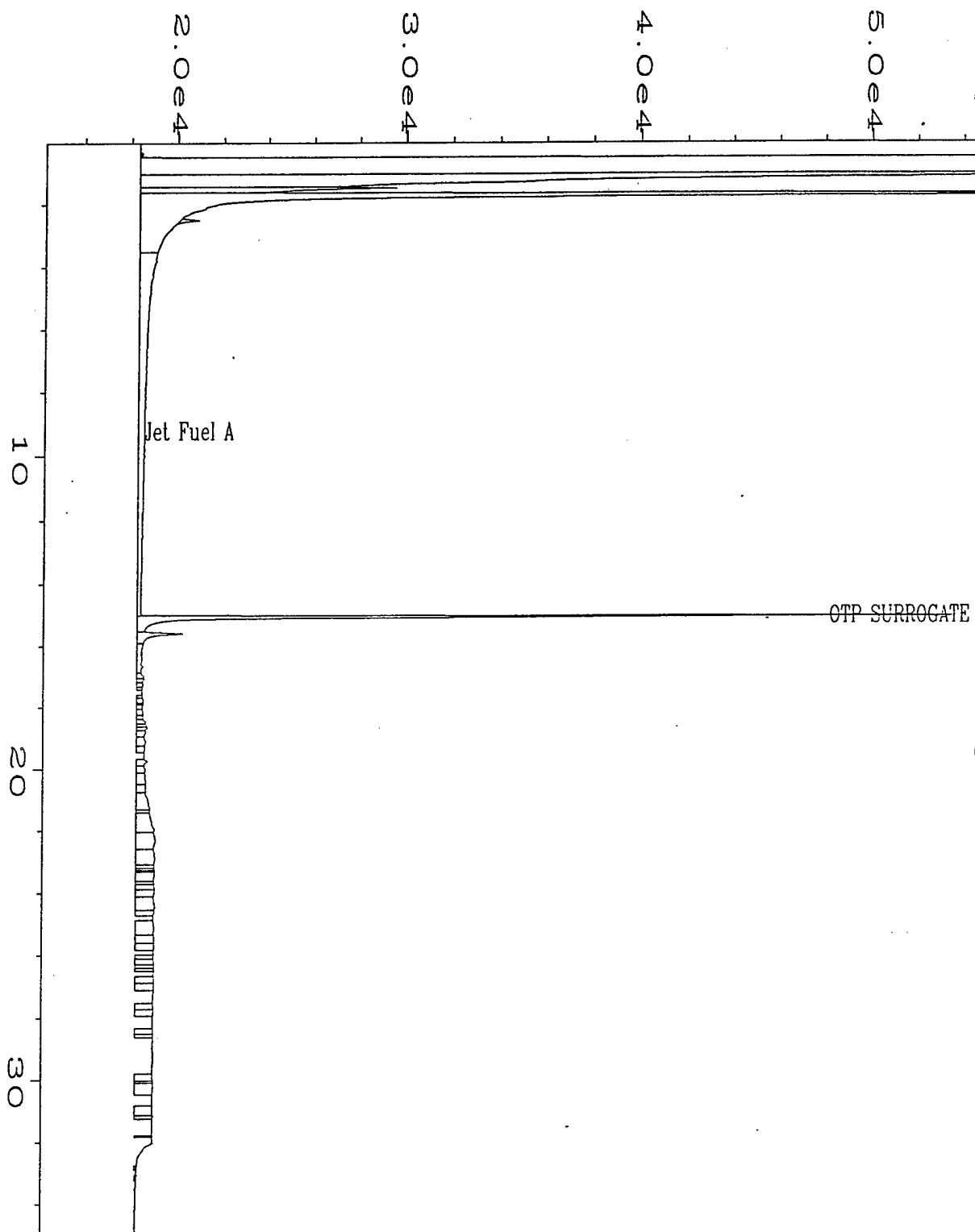


Data File Name	: C:\HPCHEM\2\DATA\JET0418\040R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 40
Instrument	: TEH	Injection Number	: 1
Sample Name	: WB041395 X05760H	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1BAS M
Acquired on	: 19 Apr 95 05:50 PM	Analysis Method	: JET041 T
Port Created on:	20 Apr 95 09:24 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		

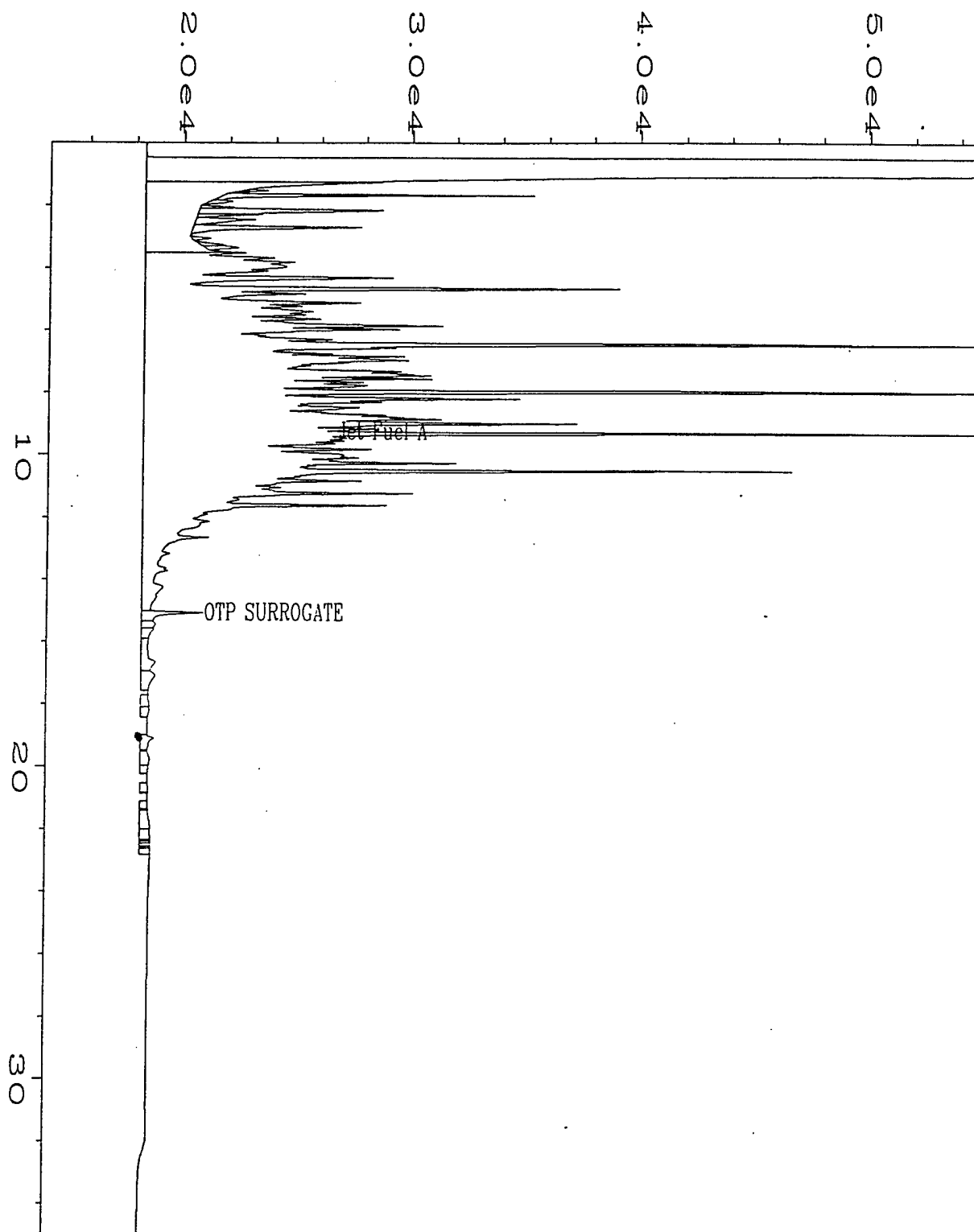
Client # SS-1 11.5-13.5 DUPLICATE



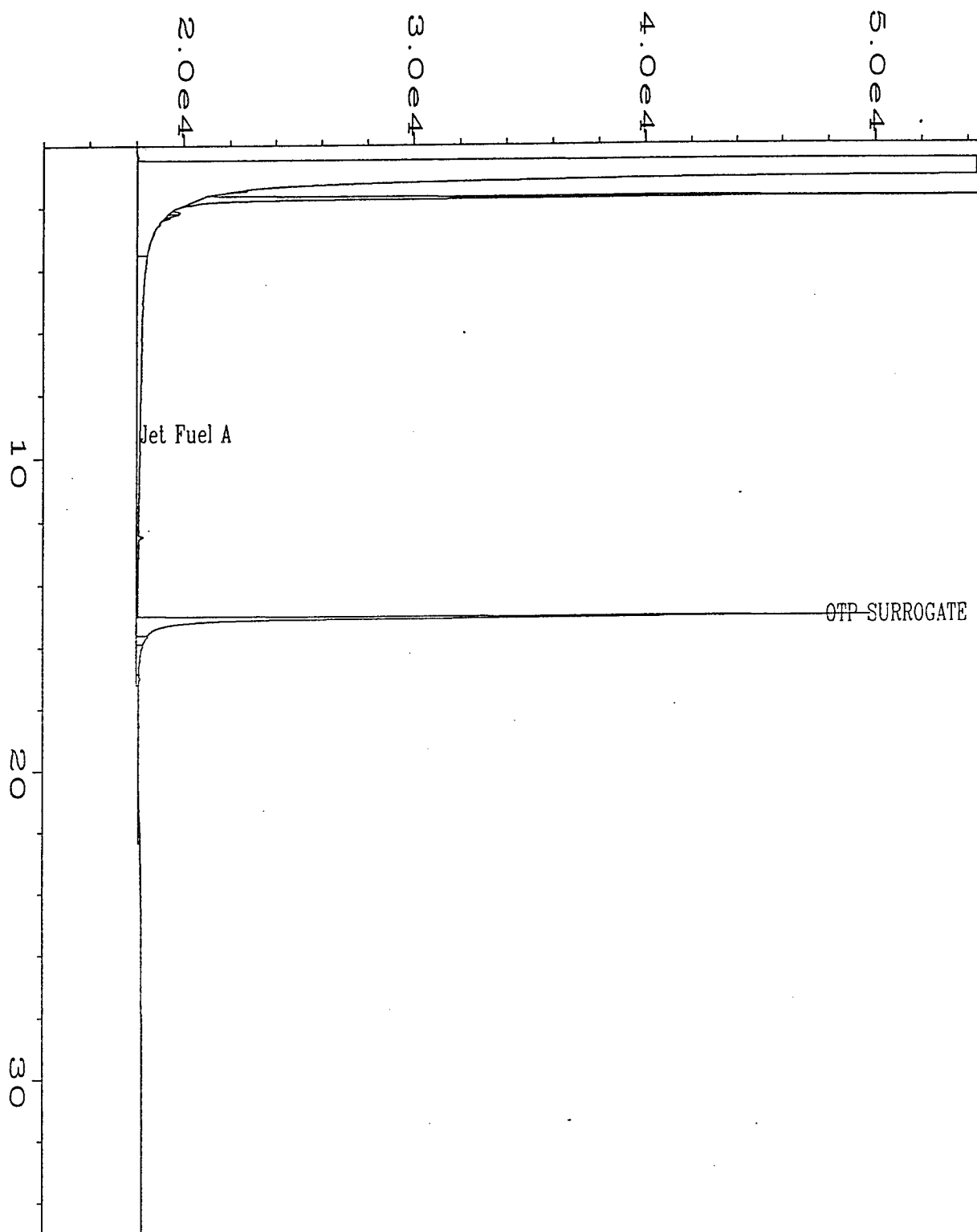
Data File Name	: C:\HPCHEM\2\DATA\JET0418\054R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 54
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05762 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 20 Apr 95 11:37 AM	Analysis Method	: JET0418.MTH
Report Created on:	20 Apr 95 01:10 PM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-1 16'-18' SOIL		



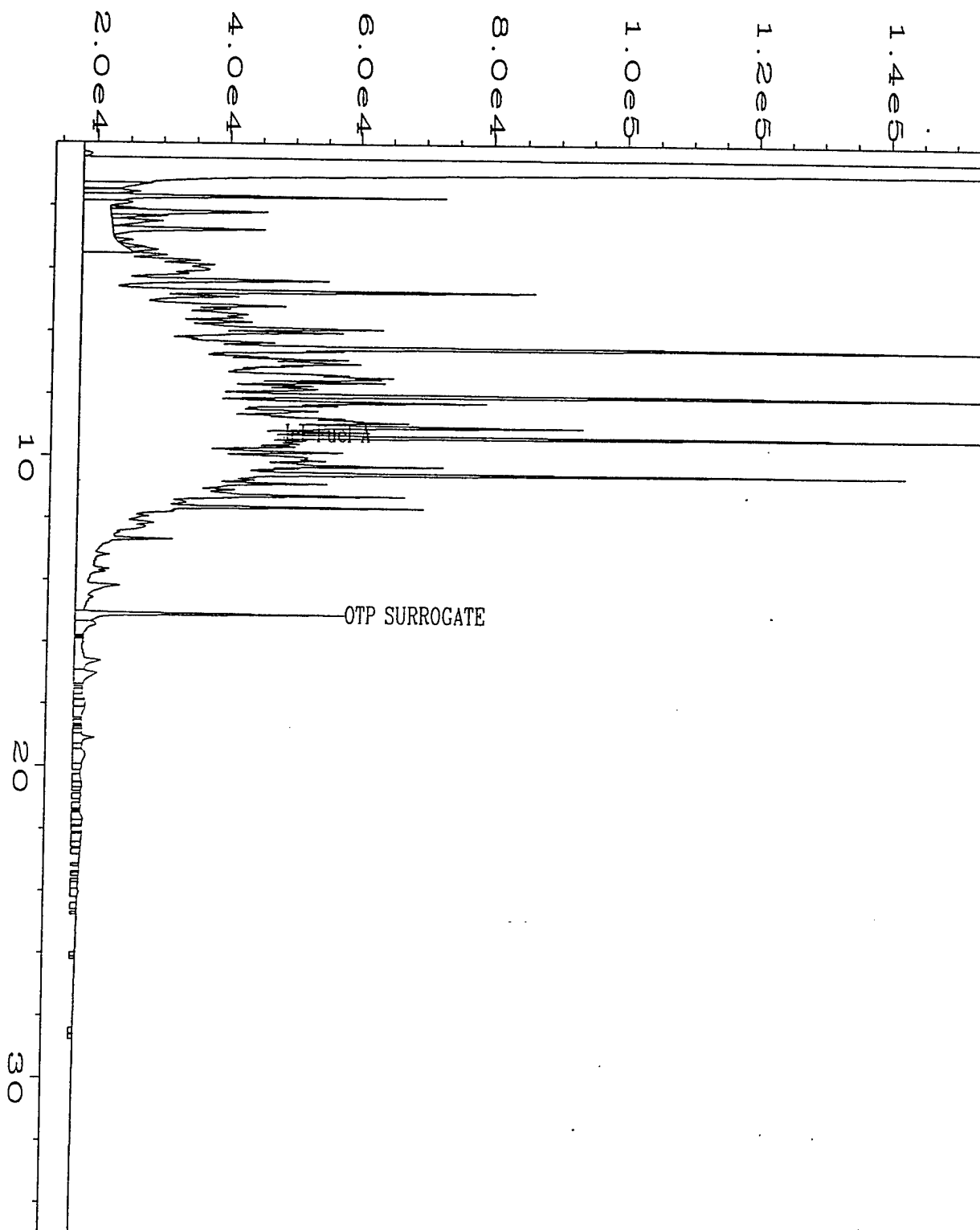
Data File Name	: C:\HPCHEM\2\DATA\JET0418\033R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 33
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05163 DF=1 <i>mjm 4/24/95</i>	Sequence Line	: 1
Run Time Bar Code:	<i>7</i>	Instrument Method:	FID1BAST.M
Acquired on	: 19 Apr 95 12:25 PM	Analysis Method	: JET0418.M
Report Created on:	20 Apr 95 09:23 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-2 11.5-13.5 SOIL		



Data File Name	: C:\HPCHEM\2\DATA\JET0418\055R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 55
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05764 DF=2 10 <i>injection</i> 5/11/95	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1BASE.MTH
Acquired on	: 20 Apr 95 12:23 PM	Analysis Method	: JET0418.MTH
Report Created on:	20 Apr 95 01:10 PM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1217 CLIENT # SS-3 9-11 SOIL		



Data File Name	: C:\HPCHEM\2\DATA\teh0424\009R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 9
Instrument	: TEH	Injection Number	: 1
Sample Name	: sb042195	Sequence Line	: 1
Time Bar Code:		Instrument Method	: FID1BA.M
Acquired on	: 24 Apr 95 06:53 PM	Analysis Method	: JET0424.MT
Report Created on	: 25 Apr 95 02:28 PM	Sample Amount	: 0
Last Recalib on	: 24 APR 95 04:23 PM	ISTD Amount	:
Multiplier	: 1		



Data File Name	: C:\HPCHEM\2\DATA\TEH0424\010R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 10
Instrument	: TEH	Injection Number	: 1
Sample Name	: x05764 df=1 Dup	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 24 Apr 95 07:43 PM	Analysis Method	: JET0424.MTH
Report Created on:	: 25 Apr 95 02:28 PM	Sample Amount	: 0
Last Recalib on	: 24 APR 95 04:23 PM	ISTD Amount	:
Multiplier	: 1		

4/25/95

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS
TEH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: 95-MW-8 11-12'	Client Project No.	: 722450.26020/SEY
Lab Sample No.	: X05755	Lab Project No.	: 95-1217
Date Sampled	: 4/12/95	EPA Method No.	: 5030/MOD.8015
Date Received	: 4/14/95	Matrix	: SOIL
Date Prepared	: 4/17/95	Method Blank	: SB041795
Date Analyzed	: 4/19/95		

Compound	Spike Added (ug/mL)	Sample Concentration (ug/mL)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Jet Fuel	1000	99.3	1050	95	60-140

Compound	Spike Added (ug/mL)	MSD Concentration (ug/mL)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Jet Fuel	1000	1070	97	2.1	50	60-140

* = Values outside of QC limits.

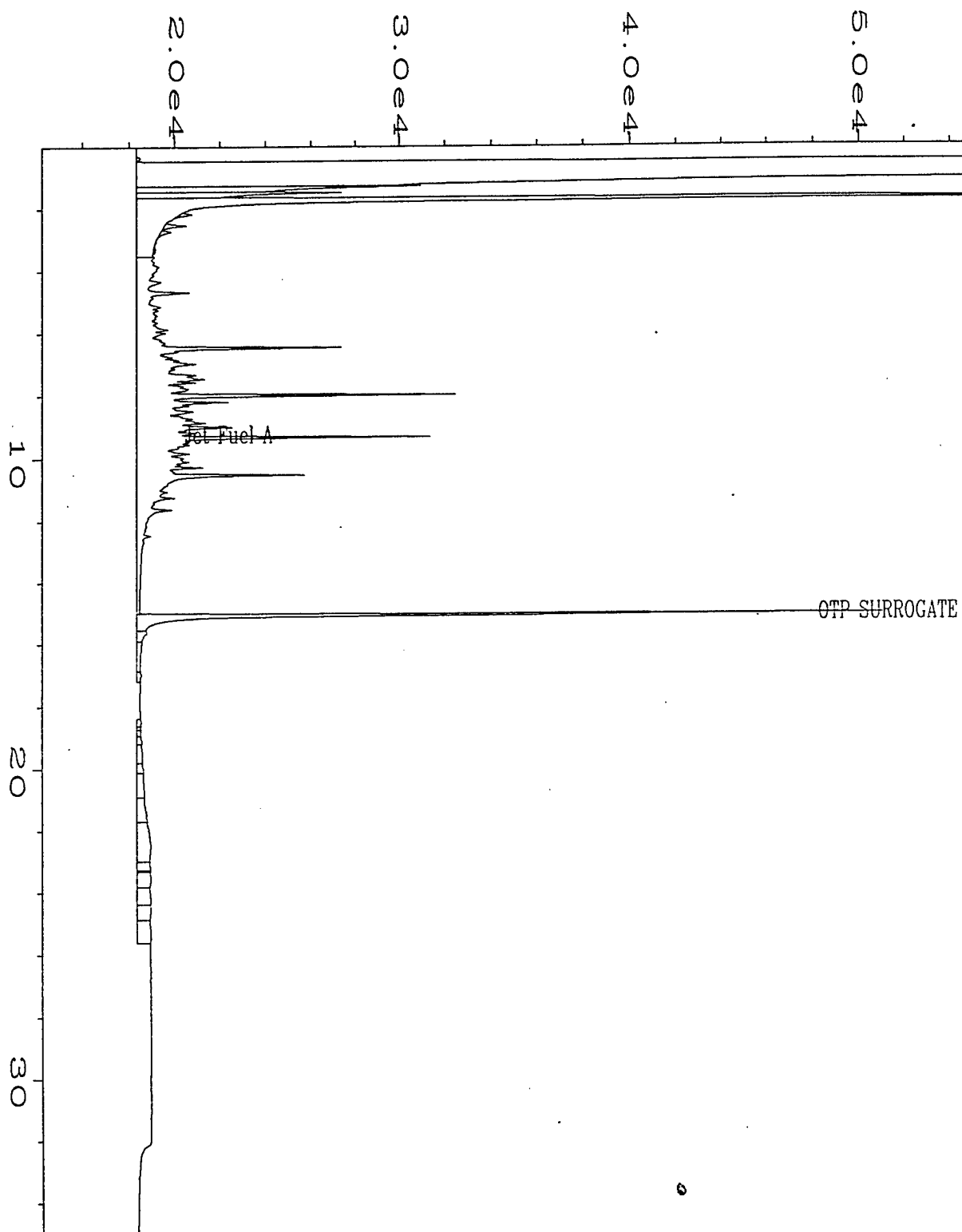
RPD: 0 out of (1) outside limits.

Spike Recovery: 0 out of (2) outside limits.

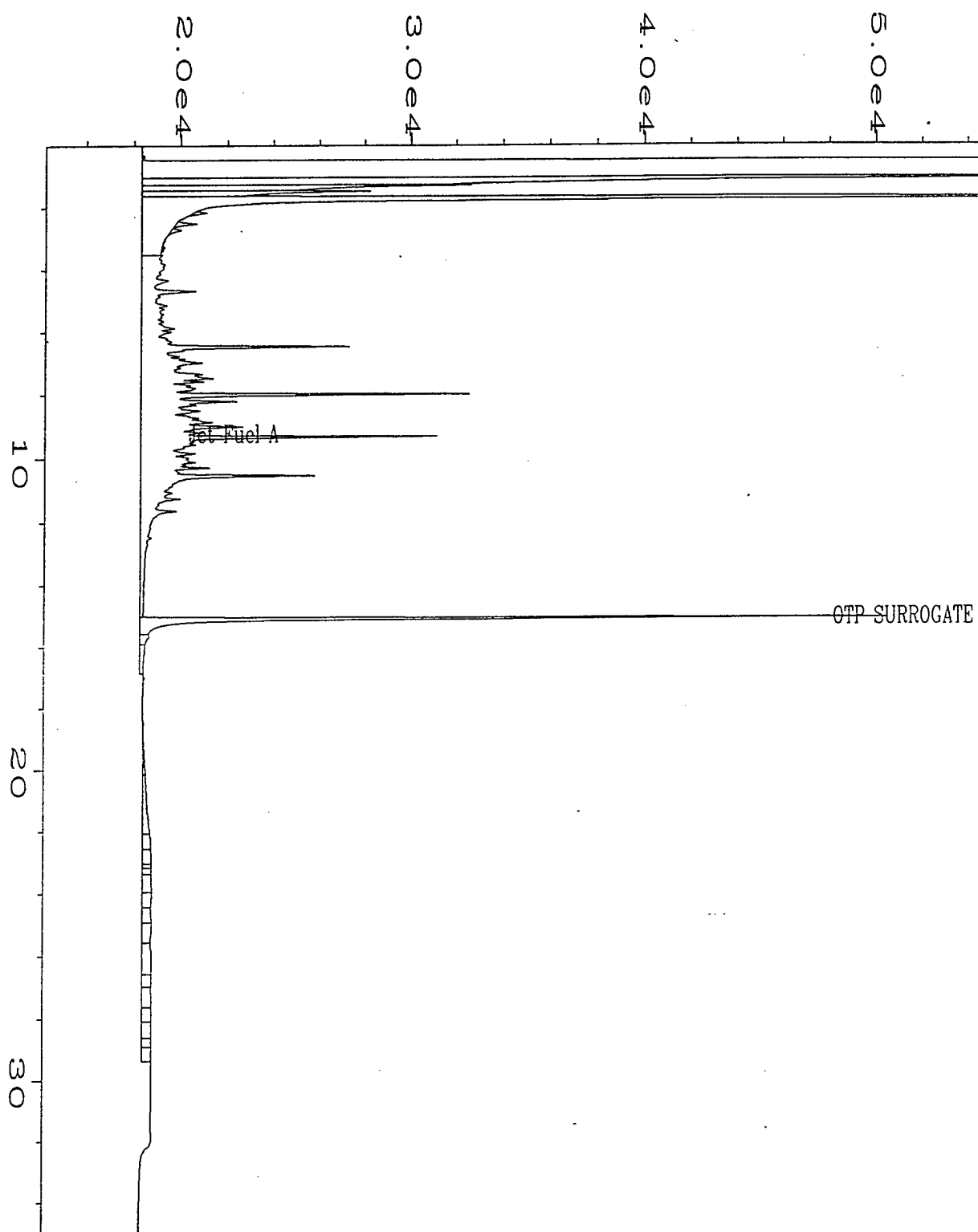
Comments: NA = Not analyzed/not applicable.

Values reported in ug/mL in the liquid extract.

mjm 4/25/95



Data File Name	: C:\HPCHEM\2\DATA\JET0418\023R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 23
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05755 MS	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1BASE.MTH
Acquired on	: 19 Apr 95 03:45 AM	Analysis Method	: JET0418.MTH
Report Created on:	19 Apr 95 10:17 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		



Data File Name	: C:\HPCHEM\2\DATA\JET0418\024R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 24
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05755 MSD	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1BA.M
Acquired on	: 19 Apr 95 04:31 AM	Analysis Method	: JET0418.MT
Report Created on:	19 Apr 95 10:18 AM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Laboratory Control Sample (LCS)

LCS Number : LCS041795 Matrix : SOIL
Date Prepared : 4/17/95 Method Number : 5030/MOD.8015
Date Analyzed : 4/19/95
Sequence Number : JET21

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
JET FUEL	1000	1120	112%	70%-130%

Surrogate Recovery: 99%

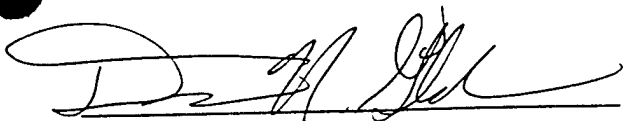
QUALIFIERS

U = TEH analyzed for but not detected.

B = TEH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

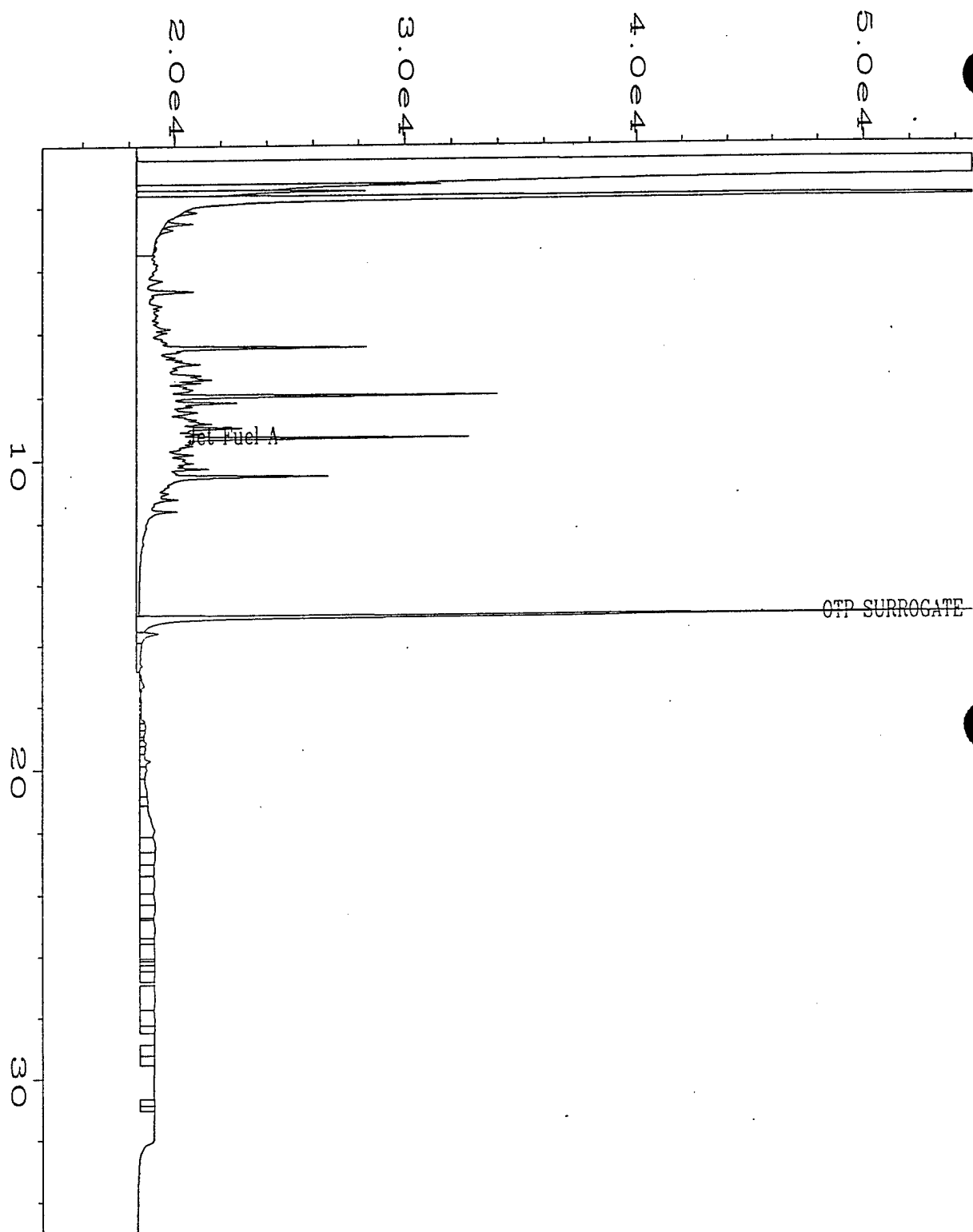
NA = Not Available.



Analyst



Approved



Data File Name	: C:\HPCHEM\2\DATA\JET0418\021R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 21
Instrument	: TEH	Injection Number	: 1
Sample Name	: LCS041795	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1B
quired on	: 19 Apr 95 02:12 AM	Analysis Method	: JET0418.M
Report Created on:	20 Apr 95 01:19 PM	Sample Amount	: 0
Last Recalib on	: 18 APR 95 06:54 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

Date Sampled : 4/12/95 Client Project ID. : 722450.2602/
Date Received : 4/14/95 Lab Project No. : 95-1217
Date Prepared : 4/26/95 Detection limit : 25.0 mgCaCO₃/L
Date Analyzed : 4/26/95 Method : EPA 310.1

<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Total Alkalinity*</u> mgCaCO ₃ /k
X05753	MW-6 15-16'	Soil	<33.0
X05757	MW-10 10-11'	Soil	<32.0
X05757 Dup	MW-10 10-11' Dup	Soil	<32.0
Method Blank	4/26/95		<5.00 (mg/L)

Quality Assurance

	<u>True Value (mgCaCO₃/L)</u>	<u>Result (mgCaCO₃/L)</u>	<u>% Recovery</u>
APG Minerals reference Lot # 13862	11.85	11.78	99.3

* Results reported on a dry-weight basis.

Debra V. Byrum
Analyst

[Signature]
Approved

1217JJ.4

HUFFMAN

LABORATORIES, INC.

Quality Analytical Services Since 1936

4630 Indiana Street • Golden, CO 80403

NON-CLP ANALYSIS RESULTS

Date: 05/01/95
Lab Name: Huffman Labs
Contact: Sue Zeller
Sample Matrix: soil

Client: Evergreen Analytical
Contact: Patty McClellan
Huffman Lab #: 160795

Client Smp#	Lab ID #	Element/Compound	Dilution Factor	Results	Units	Prep Date	Analysis Date	Sample Size (g)	Method #	Ins
MW1(12-14)BLS	16079501	TC	NA	0.05	%	NA	04/27/95	0.374	Leco CR12	
MW1(12-14)BLS	16079501	TC	NA	0.07	%	NA	04/27/95	0.325	Leco CR12	
MW5(13-14.5)	16079502	TC	NA	<0.05	%	NA	04/27/95	0.503	Leco CR12	
MW6(16-16.5)	16079503	TC	NA	0.31	%	NA	04/27/95	0.540	Leco CR12	
MW10(10-11)	16079504	TC	NA	0.09	%	NA	04/27/95	0.358	Leco CR12	
MW11(11.5-13.5)	16079505	TC	NA	<0.05	%	NA	04/27/95	0.341	Leco CR12	
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.208	COU-02	t
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.380	COU-02	t
MW5(13-14.5)	16079502	CC	NA	<0.02	%	NA	04/27/95	0.158	COU-02	t
MW6(16-16.5)	16079503	CC	NA	<0.02	%	NA	04/27/95	0.120	COU-02	t
MW10(10-11)	16079504	CC	NA	<0.02	%	NA	04/27/95	0.237	COU-02	t
MW11(11.5-13.5)	16079505	CC	NA	<0.02	%	NA	04/27/95	0.125	COU-02	t
% moisture				adjusted result						
95-1182	MW1(12-14)BLS	16079501	TOC	NA	0.05	%	NA	NA	NA	by calc
	MW1(12-14)BLS	16079501	TOC	NA	0.07	%	NA	NA	NA	by calc
	MW5(13-14.5)	16079502	TOC	NA	<0.05	%	NA	NA	NA	by calc
	MW6(16-16.5)	16079503	36.04 TOC	NA	0.31	0.48 %	NA	NA	NA	by calc
9-1217	MW10(10-11)	16079504	31.90 TOC	NA	0.09	0.12 %	NA	NA	NA	by calc
	MW11(11.5-13.5)	16079505	21.70 TOC	NA	<0.05	0.06 %	NA	NA	NA	by calc

Samples analyzed and results reported on as as received basis.

Soil samples are not homogeneous.

As per client instructions, analytical aliquot taken from end of core tube.

Analytical aliquot is not thought to be representative of the entire sample.

Values reported below Detection Limits are for reference only.

TC detection limit = 0.05 %

CC detection limit = 0.02 %

TOC detection limit = 0.05 %

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LABORATORIES, INC.

Quality Analytical Services Since 1936

4630 Indiana Street • Golden, CO 80403

NON-CLP ANALYSIS RESULTS

Date: 05/01/95

Lab Name: Huffman Labs

Contact: Sue Zeller

Sample Matrix: soil

Client: Evergreen Analytical

Contact: Patty McClellan

Huffman Lab #: 160795

Client Smp#	Lab ID #	Element/Compound	Dilution Factor	Results	Units	Prep Date	Analysis Date	Sample Size (g)	Method #	Instrument ID
MW1(12-14)BLS	16079501	TC	NA	0.05	%	NA	04/27/95	0.374	Leco CR12	#7
MW1(12-14)BLS	16079501	TC	NA	0.07	%	NA	04/27/95	0.325	Leco CR12	#7
MW5(13-14.5)	16079502	TC	NA	<0.05	%	NA	04/27/95	0.503	Leco CR12	#7
MW6(16-16.5)	16079503	TC	NA	0.31	%	NA	04/27/95	0.540	Leco CR12	#7
MW10(10-11)	16079504	TC	NA	0.09	%	NA	04/27/95	0.358	Leco CR12	#7
MW11(11.5-13.5)	16079505	TC	NA	<0.05	%	NA	04/27/95	0.341	Leco CR12	#7
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.208	COU-02	tower
MW1(12-14)BLS	16079501	CC	NA	<0.02	%	NA	04/27/95	0.380	COU-02	tower
MW5(13-14.5)	16079502	CC	NA	<0.02	%	NA	04/27/95	0.158	COU-02	tower
MW6(16-16.5)	16079503	CC	NA	<0.02	%	NA	04/27/95	0.120	COU-02	tower
MW10(10-11)	16079504	CC	NA	<0.02	%	NA	04/27/95	0.237	COU-02	tower
MW11(11.5-13.5)	16079505	CC	NA	<0.02	%	NA	04/27/95	0.125	COU-02	tower
MW1(12-14)BLS	16079501	TOC	NA	0.05	%	NA	NA	NA	by calc	NA
MW1(12-14)BLS	16079501	TOC	NA	0.07	%	NA	NA	NA	by calc	NA
MW5(13-14.5)	16079502	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA
MW6(16-16.5)	16079503	TOC	NA	0.31	%	NA	NA	NA	by calc	NA
MW10(10-11)	16079504	TOC	NA	0.09	%	NA	NA	NA	by calc	NA
MW11(11.5-13.5)	16079505	TOC	NA	<0.05	%	NA	NA	NA	by calc	NA

Samples analyzed and results reported on as as received basis.

Soil samples are not homogeneous.

As per client instructions, analytical aliquot taken from end of core tube.

Analytical aliquot is not thought to be representative of the entire sample.

Values reported below Detection Limits are for reference only.

TC detection limit = 0.05%

CC detection limit = 0.02%

TOC detection limit = 0.05%

HUFFMAN

LABORATORIES, INC.

Quality Analytical Services Since 1936

4630 Indiana Street • Golden, CO 80403

NON-CLP ANALYSIS RESULTS LABORATORY CONTROL STANDARD

Date: 05/01/95
Lab Name: Huffman Labs
Contact: Sue Zeller

Client: Evergreen Analytical
Contact: Patty McClellan
Huffman Lab #: 160795

LABORATORY CONTROL STANDARD

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
LCS	BN 4851	TC	3.35	3.39	101	%	04/27/95	Leco CR12	#7
LCS	BN 4056	CC	11.33	11.34	100	%	04/27/95	COU-02	tower
LCS	BN 4056	CC	11.33	11.46	101	%	04/28/95	COU-02	tower

SPIKE RECOVERY

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
SPIKE	BN 4712	TC	12600	12482	99	ug C	04/27/95	Leco CR12	#7
SPIKE DUP	BN 4712	TC	12120	12076	100	ug C	04/27/95	Leco CR12	#7
SPIKE	BN 4712	CC	525	529	101	ug C	04/28/95	COU-02	tower
SPIKE DUP	BN 4712	CC	737	729	99	ug C	04/28/95	COU-02	tower

PD = Prep date

HUFFMAN

LABORATORIES, INC.

Quality Analytical Services Since 1936

4630 Indiana Street • Golden, CO 80403

NON-CLP QA/QC ANALYSIS RESULTS

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Date: 05/01/95 Client: Evergreen Analytical
Lab Name: Huffman Labs Contact: Patty McClellan
Contact: Sue Zeller Huffman Lab #: 160795

INITIAL CALIBRATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
ICS	BN 4712	TC	12.00	11.91	99	%	04/27/95	Leco CR12	#7
ICS	BN 4712	CC	12.00	11.95	100	%	04/27/95	COU-02	tower
ICS	BN 4712	CC	12.00	12.04	100	%	04/28/95	COU-02	tower

Slope =

NA

Intercept =

NA

95% Correlation Coefficient =

NA

Single point calibrations for this test.

CONTINUING CALIBRATION VERIFICATION

Lab ID #	Source	Element/ Compound	True Value	Found Value	% R	Units	Date	Method #	Instrument ID
CCS	BN 4712	TC	12.00	11.98	100	%	04/27/95	Leco CR12	#7
CCS	BN 4712	TC	12.00	11.94	100	%	04/27/95	Leco CR12	#7
CCS	BN 4712	CC	12.00	12.11	101	%	04/27/95	COU-02	tower
CCS	BN 4712	CC	12.00	12.17	101	%	04/28/95	COU-02	tower

4630 Indiana Street • Golden, CO 80403

BALANCE # 19

BN 4851

LYST in Anderson	DATE 4-27-95	REVIEWED js.	DATE 4/28/95	PAGE 1	OF 2
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LABORATORIES, INC.

Quality Analytical Services Since 1936

4630 Indiana Street • Golden, CO 80403

ANALYSIS	CARBONATE CARBON	METHOD	SOP COU-02
ANALYZER #	6	COULOMETER #	
BALANCE #	112		3

CALCIUM CARBONATE (STD #333) CaCO_3	BOTTLE # 4712	% C THEORY = 12.00%	SODIUM CARBONATE Na_2CO_3	BOTTLE # 2730	% C THEORY = 11.33 %
---	------------------	---------------------	--	------------------	----------------------

SAMPLE NO.	TARE WT. GRAMS	TARE + SAMPLE WT.	SAMPLE WT. GRAMS	NOTES	COUNTS μ GRAMS	LESS BLANK 8	% CARBON AS CARBONATE CARBON	QC	% RECOVERY
BL					6.8			IB	
BL					8.6			MB	
BL					8.5			MB	
H_2CO_3	0.850016	0.856541	0.006525		748.0	740.0	11.34	ICS	100.09
CaCO_3	0.863424	0.868667	0.005243		738.6	633.6	11.95	LCSK	99.6
160701	0.941366	1.149121	0.207755	(NH)	8.0	0	0		0
160701	0.898693	1.278806	0.380113	(NH) 3 Spots Acid 2 Spots Clock	11.1	3.1	0.0000091		~0
160702	0.873199			(NH) Dropped Bot					
0702	0.912632	1.070765	0.157933	(NH)	8.9	.9	0.0000056		~0
160703	0.886964	1.007451	0.120487	(NH)	7.9	0	0		~0
160704	0.876686	1.114147	0.237461	(NH)	9.1	1.1	0.0000046		~0
160705	0.838101	0.963910	0.125809	(NH)	7.8	0	0		~0
CaCO_3	0.847686	0.853324	0.005638		690.9	682.9	12.11	CCS	100.9

° m. l.

DATE
4-27-95

REVIEWED

DATE 4/28/95

PAGE / OF /

RE:USED : 2003

4630 Indiana Street • Golden, CO 80403

ANALYST <i>J. M. Miller</i>	DATE <i>4-28-95</i>	REVIEWED <i>SC</i>	DATE <i>6/1/95</i>	PAGE <i>1</i> OF <i>2</i>
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REVISED 100000

Evergreen Analytical Sample Log Sheet

Project # 95-1240

Date(s) Sampled: 04/17/95 COC

Date Due: 04/21-BTEX,TVH,
05/02-OTHERS

Date Received: 04/18/95 1030

Holding Time(s): 04/19-NO₂,NO₃
05/01-BTEX,TVH,TEH,ALKALINITY
Rush STANDARD

Client Project I.D. 722450.2602/SJAFB

Client: Parsons Engineering Science, Inc.

Shipping Charges 5.00

Address: 1700 Broadway Suite 900
Denver, CO 80290

E.A. Cooler # N/A

Airbill # FED EX 4616481811

Contact: TODD WIEDEMEIER

Custody Seal Intact? N/A
Cooler Bottles

Client P.O.

COC Present Y

Sample Tags Present? Y

Sample Tags Listed? Y

Sample(s) Sealed? Y

Phone #831-8100 Fax #831-8208

Special Invoicing/Billing

Special Instructions ★ ALL BTEX AND VOA SAMPLES ARE TO INCLUDE CHLOROBENZENE
TMB AND TMB. ✓ PLUS MTBE, EDB, ISOPROPYL ETHER, CHLOROBENZENE,
1,2-DICHLOROBENZENE, 1,3-DICHLOROBENZENE, 1,4-DICHLOROBENZENE,
DICHLORODIFLUOROMETHANE AND TRICHLOROFLOUROMETHANE. DID NOT RECEIVE SAMPLES
MW-6, CPT-16 FOR ALKALINITY.

#	Client ID#	Analysis	Mtx	Btl	LOC
X05832L-N	MW-11	★ ✓ VOA 624	W	40V	9
X05829A/B	MW-6	★ BTEX 602	W	40V	2
X05830A/B	MW-7	★ BTEX 602	W	40V	2
X05831A/B	MW-10	★ BTEX 602	W	40V	2
X05832A/B	MW-11	★ BTEX 602	W	40V	2
X05834A/B	CPT-16	★ BTEX 602	W	40V	2
X05833A/B	TRIP BLANK	★ BTEX 602	W	40V	2
X05829C/D	MW-6	TVH	W	40V	2
X05830C/D	MW-7	TVH	W	40V	2
X05831C/D	MW-10	TVH	W	40V	2
X05832C/D	MW-11	TVH	W	40V	2
X05834C/D	CPT-16	TVH	W	40V	2
X05829E	MW-6	TEH JET	W	1LA	D4
X05830E	MW-7	TEH JET	W	1LA	D4

R=Sample to be returned

GC/MS 2 GC 4 Metals Wet Chem 2 SxPrep 1 Acct 1
SxRec C QA/QC C Sales C File Orig

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X05831E	MW-10	TEH JET	W	1LA	D4
5832E	MW-11	TEH JET	W	1LA	D4
X05834E	CPT-16	TEH JET	W	1LA	D4
X05829F-I	MW-6	METHANE	W	1LA	D4
X05830F-I	MW-7	METHANE	W	1LA	D4
X05831F-I	MW-10	METHANE	W	1LA	D4
X05832F-I	MW-11	METHANE	W	1LA	D4
X05834F-I	CPT-16	METHANE	W	1LA	D4
X05829J	MW-6	ANIONS-Cl, SO ₄ ⁻² , NO ₂ , NO ₃	W	125P	D4
X05831J	MW-10	ANIONS-Cl, SO ₄ ⁻² , NO ₂ , NO ₃	W	125P	D4
X05830J	MW-7	ANIONS-SO ₄ ⁻² , NO ₂ , NO ₃	W	125P	D4
X05832J	MW-11	ANIONS-SO ₄ ⁻² , NO ₂ , NO ₃	W	125P	D4
X05834J	CPT-16	ANIONS-SO ₄ ⁻² , NO ₂ , NO ₃	W	125P	D4
X05830K	MW-7	ALKALINITY	W	1LA	D4
X05831K	MW-10	ALKALINITY	W	1LA	D4
X05832K	MW-11	ALKALINITY	W	1LA	D4

Page 2 of 2 Pages

Project # 95-1240

Sample to be returned

PROJECT SPECIAL INSTRUCTIONS

95-
~~94~~ 1240

Date: 4/18 EAL Contact: Patty Client Contact: Jedd Wiedern
Parsons E.S.

INSTRUCTIONS:

Please remove MTBE from BTEX analysis
for samples X05829 through X05834.

X05832 Please analyze Method 624 +
MTBE, EDB, isopropyl ether, chlorobenzene,
1,2-dichlorobenzene, 1,3-DCB, 1,4-DCB,
dichlorodifluoromethane and trichlorofluoromethane.

Please take these samples off HOLD.

Date & Time Rec'd: 4/18/95 1030 Shipped Via: Fed Ex 461648

Client: Parsons ES&E (Airbill # if applicable)

Client Project ID(s): 722450, 2602

EAL Project #(s): 95-1240

EAL Cooler(s): Y (N)

Cooler# Client

Ice packs (Y) N Y N Y N Y N Y N

Temperature °C 3°

- | | Y | N | N/A |
|--|----------|----------|----------|
| 1. Custody seal(s) present: | | | |
| Seals on cooler intact | | <u>✓</u> | <u>✓</u> |
| Seals on bottle intact | | | <u>✓</u> |
| 2. Chain of Custody present: | <u>✓</u> | | |
| 3. Containers broken or leaking: | | <u>✓</u> | |
| (Comment on COC if Y) | | | |
| 4. Containers labeled: | <u>✓</u> | | |
| 5. COC agrees w/ bottles received: | | <u>✓</u> | |
| (Comment on COC if N) | | | |
| 6. COC agrees w/ labels: | | <u>✓</u> | |
| (Comment on COC if N) | | | |
| 7. Headspace in VOA vials-waters only | | <u>✓</u> | |
| (comment on COC if Y) | | | |
| 8. VOA samples preserved: | | <u>✓</u> | |
| 9. pH measured on metals, cyanide or phenolics*: | | | <u>✓</u> |
| List discrepancies | | | |
| *Non-EAL provided containers only, water samples only. | | | |
| 10. Metal samples present: | | | <u>✓</u> |
| Total _____, Dissolved _____ | | | |
| D or PD to be filtered: | | | |
| T, TR, D, PD to be Preserved: | | | |
| 11. Short holding times: | | <u>✓</u> | |
| Specify parameters | | | |
| 12. Multi-phase sample(s) present: | | <u>✓</u> | |
| 13. COC signed w/ date/time: | <u>✓</u> | | |

Comments: MW-6 and CPT-16 for alkalinity missing. pm 4/18/95

(Additional comments on back)

Custodian Signature/Date: Lee Connor 4/18/95

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES REQUEST

Page 1 of

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Parsons ES
ADDRESS 401 Harrison Oaks Blvd Suite 210
CITY Carly STATE NC ZIP 27573
PHONE# (919) 677-0080 FAX (919) 677-0118

CLIENT CONTACT (print)

PROJECT I.D. 7-22482, Z602

EAL QUOTE # P.O.#

TURNAROUND REQUIRED*

*expedited turnaround subject to additional fee

Sampler Name: Michael K Baskett
(signature) Michael K Baskett
(print) Michael K Baskett

Evergreen Analytical Cooler No.
Cooler Received

PRINT

Please all information:

CLIENT
SAMPLE
IDENTIFICATION

DATE
SAMPLED
TIME

Sample No.	Sample Name	Sample Date	Sample Time	Sample Location	Sample Size	Sample Type	Sample Method	Sample Result	Sample Unit	Sample Comment	Sample Status	Sample Date	Sample Time	Sample Location	Sample Size	Sample Type	Sample Method	Sample Result	Sample Unit	Sample Comment	Sample Status	Sample Date	Sample Time	Sample Location	Sample Size	Sample Type	Sample Method	Sample Result	Sample Unit	Sample Comment	Sample Status
MW-6	4/17/95	0940	11	✓																											
MW-7	4/17/95	1145	11	✓																											
MW-10	4/17/95	1200	11	✓																											
MW-11	4/17/95	1250	14	✓																											
trip blank	4/17/95		2	✓																											
CPT-16	4/17/95	300	11	✓																											
HT:																															
DD:																															

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB042095
Date Prepared : 4/20/95
Date Analyzed : 4/20/95

Client Project No. : 722450.2602/SJAFB
Lab Project No. : 95-1240
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2042009

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		107%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:


E = Extrapolated value.

U = Compound analyzed for, but not detected.

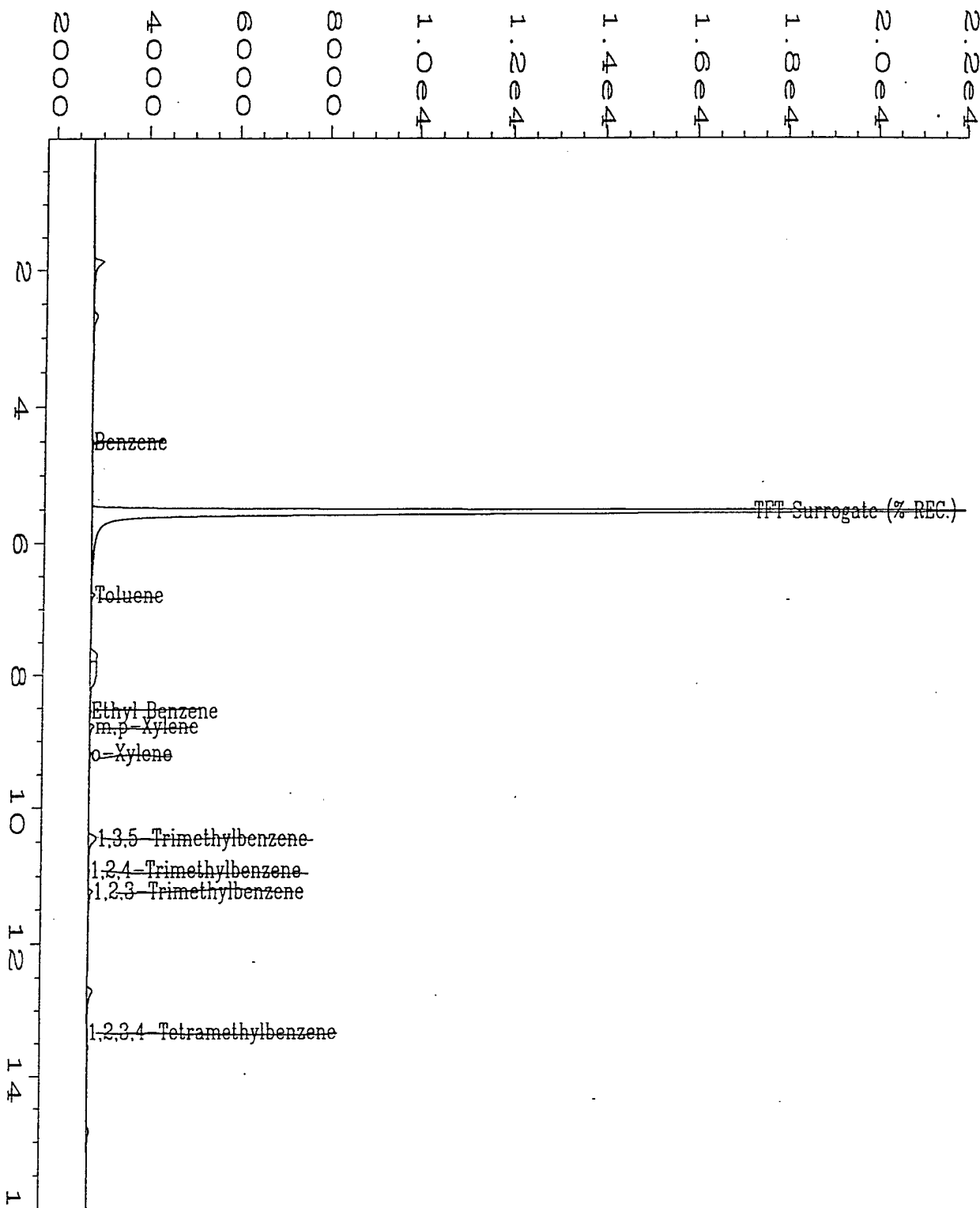
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20420\009R0101.D	Page Number	: 1
Operator	: KAPRIE S. CONE	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB042095	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20420.MTH
Recorded on	: 20 Apr 95 06:19 PM	Analysis Method	: BX20420.MTH
Report Created on:	21 Apr 95 01:21 PM	Sample Amount	: 0
Last Recalib on	: 20 Apr 95 05:30 PM	ISTD Amount	:
Multiplier	: 1		

DM 5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB042195
Date Prepared : 4/21/95
Date Analyzed : 4/21/95

Client Project No. : 722450.2602/SJAFB
Lab Project No. : 95-1240
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2042110

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		100%	70%-130% (QC limits)

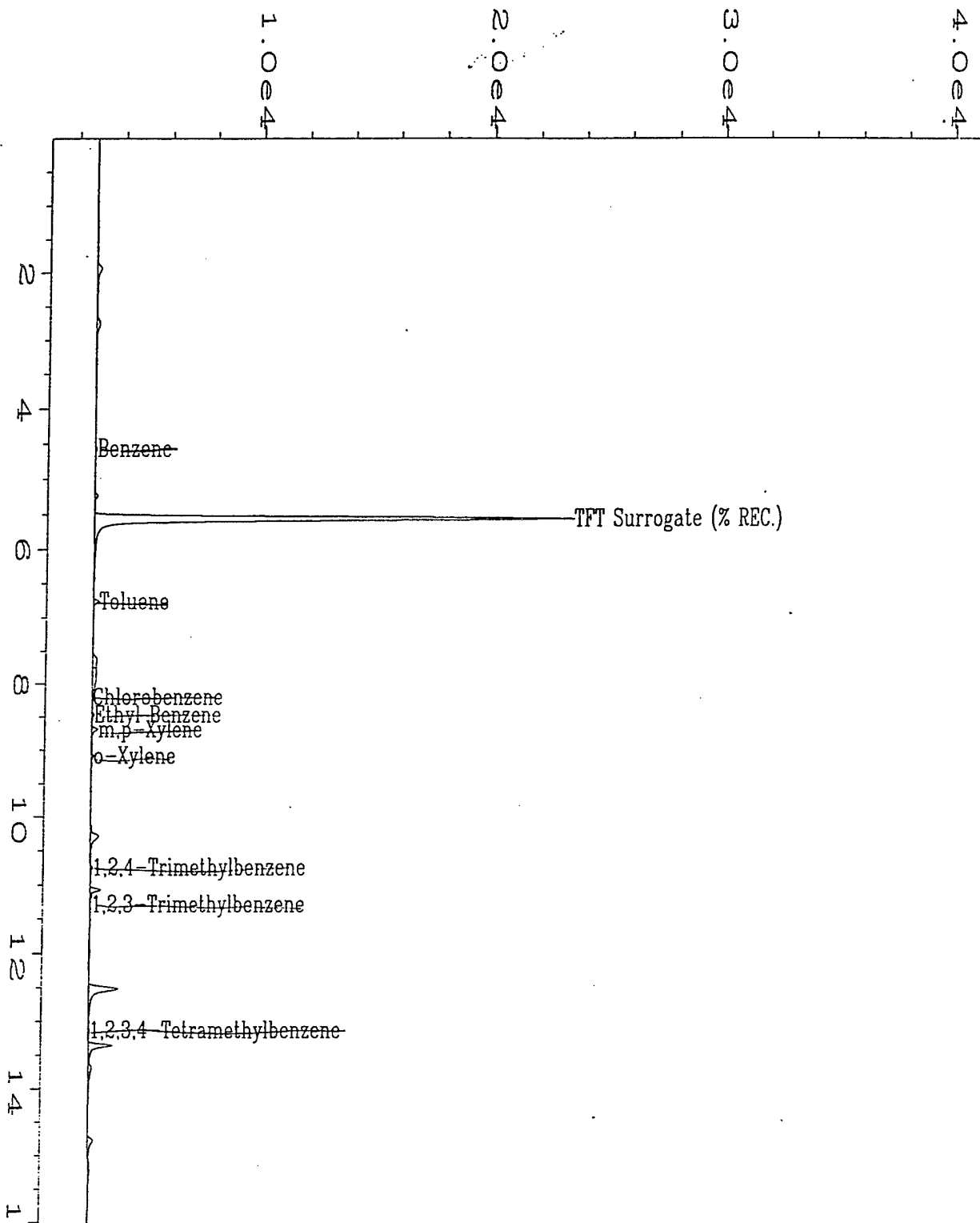
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



User modified

Data File Name	: C:\HPCHEM\2\DATA\BX20421\010R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB042195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20421.MTH
Acquired on	: 21 Apr 95 03:07 PM	Analysis Method	: BX20421.MTH
Report Created on:	21 Apr 95 03:29 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 1		

pm 5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number	: MB042395	Client Project No.	: 722450.2602/SJAFB
Date Prepared	: 4/23/95	Lab Project No.	: 95-1240
Date Analyzed	: 4/23/95	Dilution Factor	: 1.00
		Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX1042310

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		92%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

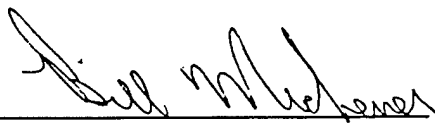
E = Extrapolated value.

U = Compound analyzed for, but not detected.

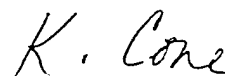
B = Compound also found in the blank.

RL = Reporting Limit.

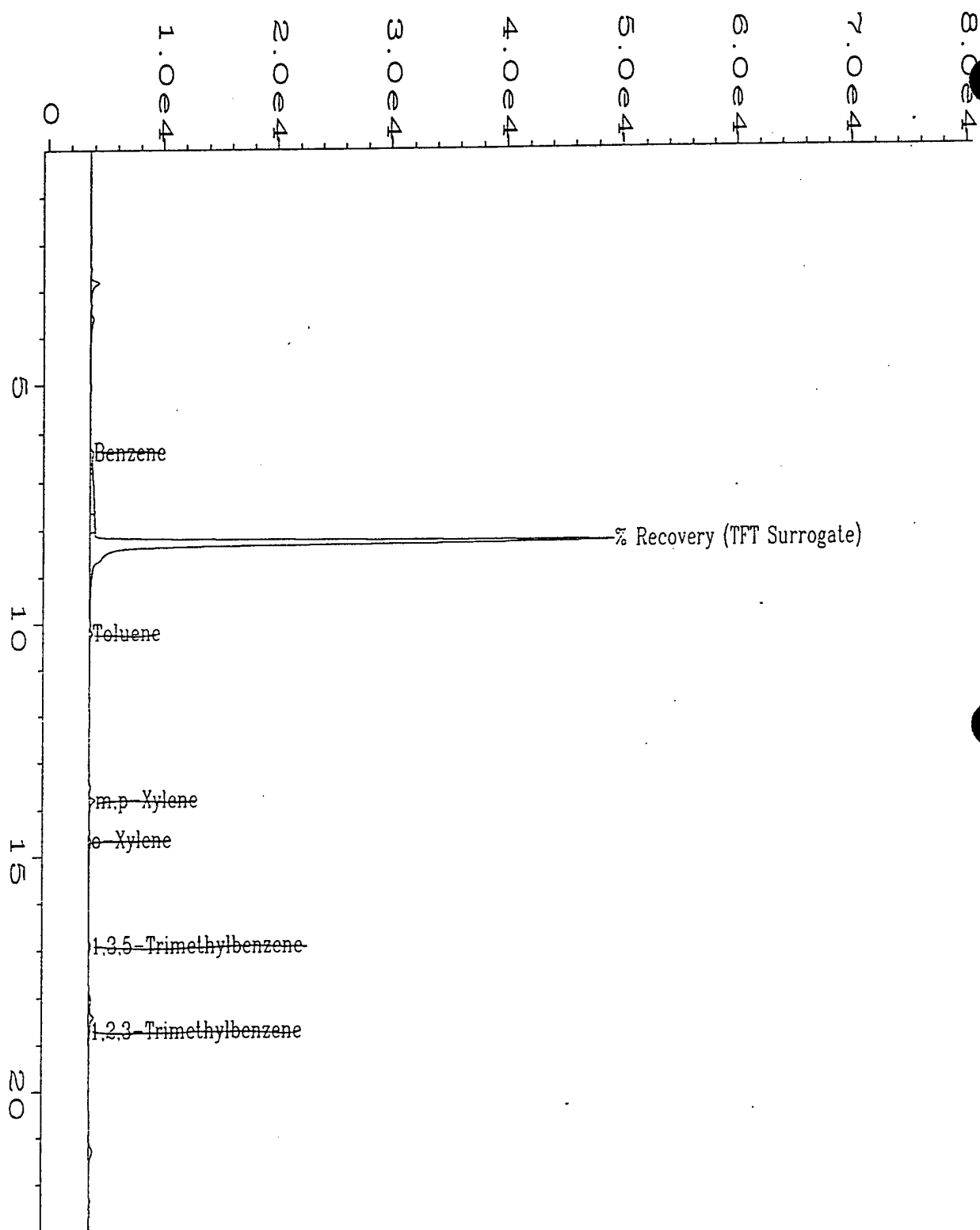
NA = Not Available/Not Applicable.



Analyst



Approved



user modified

Data File Name : E:\1\DATA\BX10423\010F0901.D
 Operator : SW Tyson
 Instrument : BTEX1
 Sample Name : MB042395
 Run Time Bar Code:
 Acquired on : 23 Apr 95 02:42 PM
 Report Created on: 25 Apr 95 01:07 PM
 Last Recalib on : 24 APR 95 10:52 AM
 Multiplier : 1

Page Number : 1
 Vial Number : 10
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX10423.MT
 Analysis Method : BX10423.MT
 Sample Amount : 0
 ISTD Amount :

one 5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-6	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05829	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 1.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/20/95	Matrix	: Water
Date Analyzed	: 4/20/95	Lab File No.	: BX2042010
		Method Blank No.	: MB042095

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	25	0.4
Toluene	108-88-3	1.0	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		108%	70%-130% (QC limits)

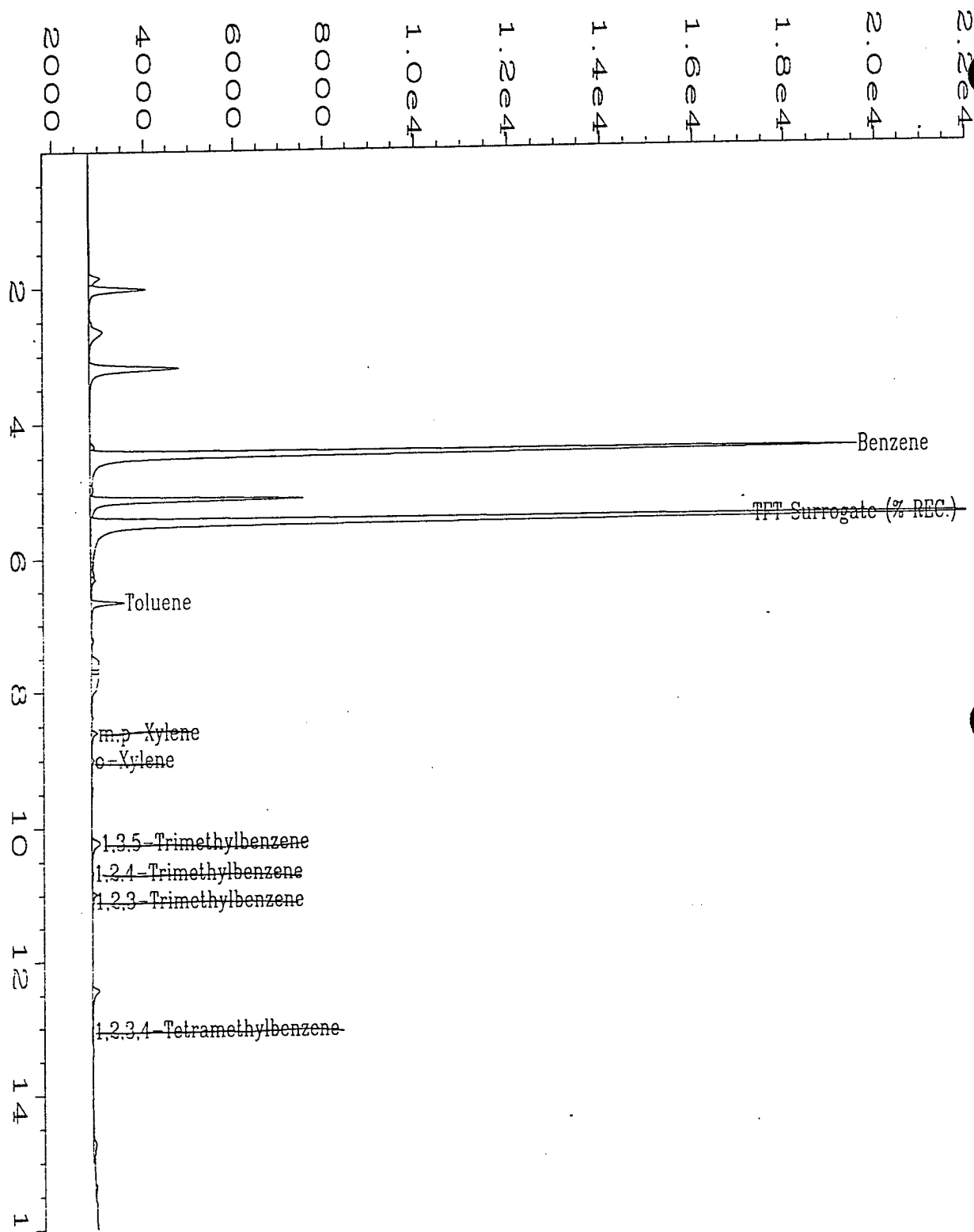
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Amckella
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20420\010R0101.D	Page Number	: 1
Operator	: KAPRIE S. CONE	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05829;1;5	Sequence Line	: 1
Print Time Bar Code:		Instrument Method	: BX20420.MT
Printed on	: 20 Apr 95 06:55 PM	Analysis Method	: BX20420.MT
Report Created on:	: 20 Apr 95 07:11 PM	Sample Amount	: 0
Last Recalib on	: 20 APR 95 05:30 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1240; MW-6; 5 ML WATER		

20/5/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-6	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05829 Dup	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 1.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/20/95	Matrix	: Water
Date Analyzed	: 4/20/95	Lab File No.	: BX2042013
		Method Blank No.	: MB042095

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	23	0.4
Toluene	108-88-3	1.0	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		98%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

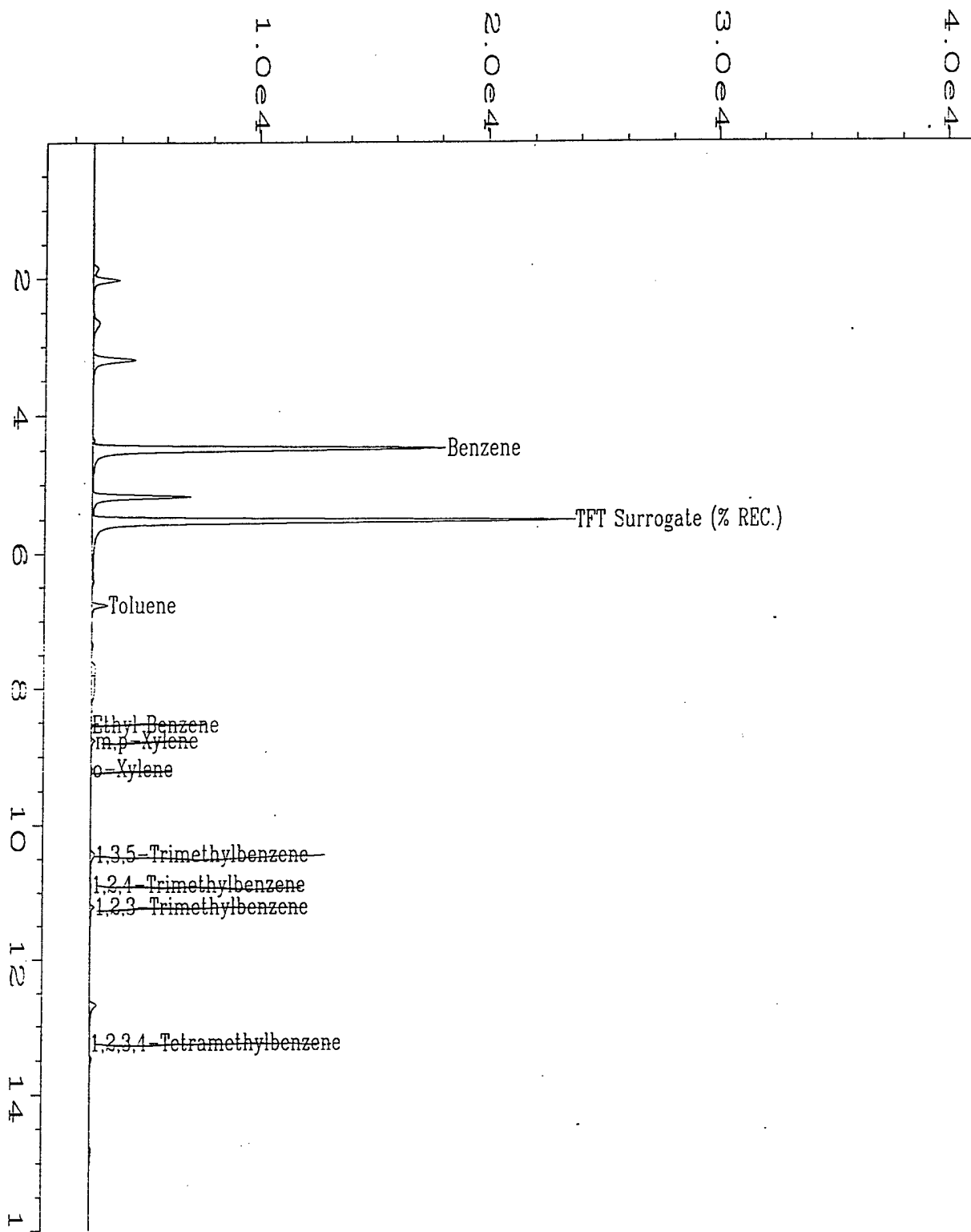
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20420\013R0101.D	Page Number	: 1
Operator	: KAPRIE S. CONE	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05829DUP;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20420.MTH
Acquired on	: 20 Apr 95 08:41 PM	Analysis Method	: BX20420.MTH
Report Created on:	: 21 Apr 95 01:20 PM	Sample Amount	: 0
Last Recalib on	: 20 Apr 95 05:30 PM	ISTD Amount	:
Multiplier	: 1		

pm 5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-7	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05830	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 1.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/20/95	Matrix	: Water
Date Analyzed	: 4/20/95	Lab File No.	: BX2042014
		Method Blank No.	: MB042095

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	0.4
Toluene	108-88-3	11.0	0.4
Chlorobenzene	108-90-7	0.8	0.4
Ethyl Benzene	100-41-4	**	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	0.4
1,3,5-Trimethylbenzene	108-67-8	7.6	0.4
1,2,4-Trimethylbenzene	95-63-6	8.7	0.4
1,2,3-Trimethylbenzene	526-73-8	30	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	9.8	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		105%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042111 (DF = 5).

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

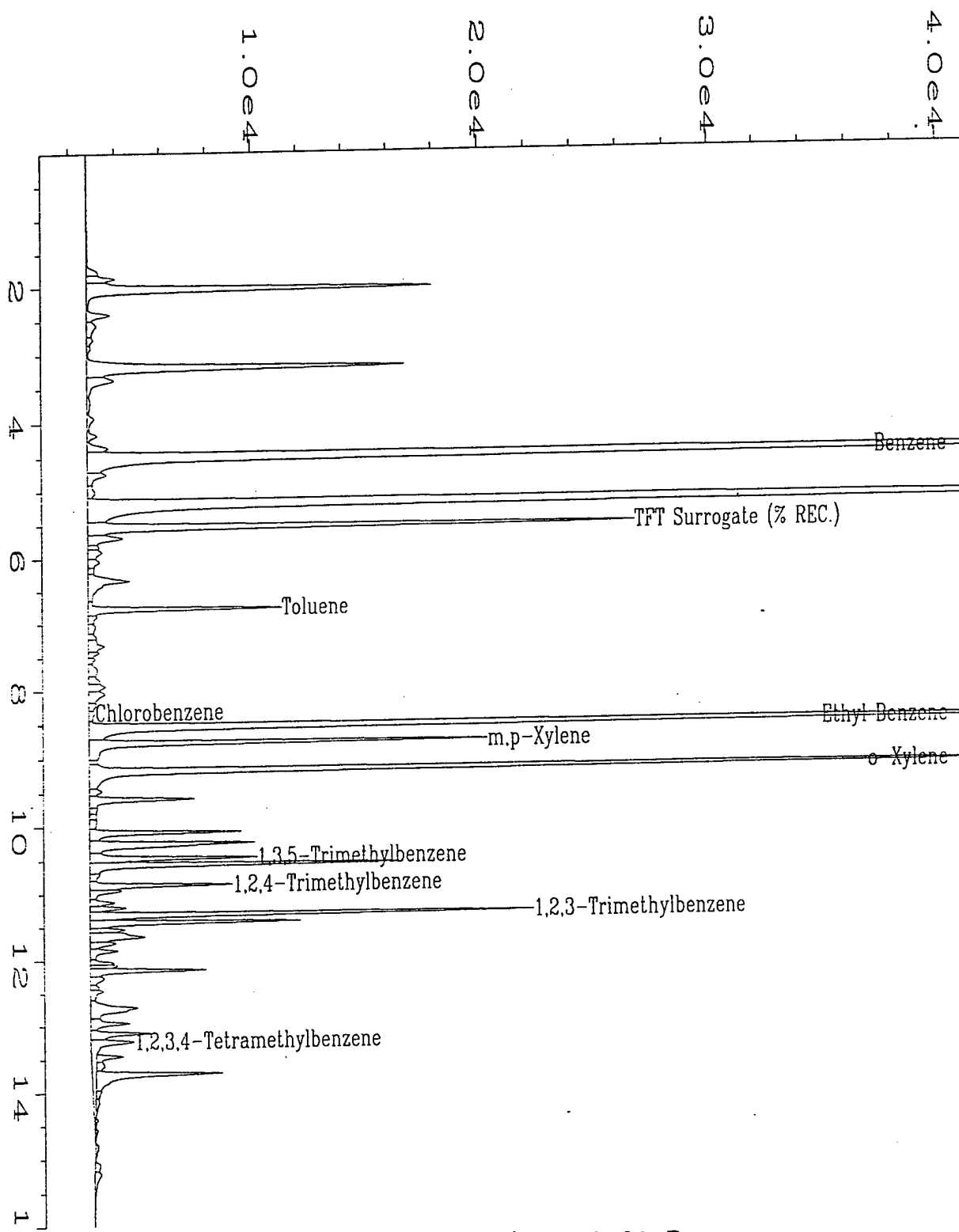
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

AmCelle
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20420\014R0101.D	Page Number	: 1
Operator	: KAPRIE S. CONE	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05830;1;5	Sequence Line	: 1
Time Bar Code:		Instrument Method	: BX20420.MT
Acquired on	: 20 Apr 95 09:17 PM	Analysis Method	: BX20420.MT
Report Created on	: 20 Apr 95 09:34 PM	Sample Amount	: 0
Last Recalib on	: 20 APR 95 05:30 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1240; MW-7; 5 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number : MW-7
Lab Sample Number : X05830
Date Sampled : 4/17/95
Date Received : 4/18/95
Date Prepared : 4/21/95
Date Analyzed : 4/21/95

Client Project No. : 722450.2602/SJAFB
Lab Project No. : 95-1240
Dilution Factor : 5.00
Method : 602
Matrix : Water
Lab File No. : BX2042111
Method Blank No. : MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	180	2.0
Toluene	108-88-3	**	2.0
Chlorobenzene	108-90-7	**	2.0
Ethyl Benzene	100-41-4	120	2.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	100	2.0
3,5-Trimethylbenzene	108-67-8	**	2.0
1,2,4-Trimethylbenzene	95-63-6	**	2.0
1,2,3-Trimethylbenzene	526-73-8	**	2.0
1,2,3,4-Tetramethylbenzene	488-23-3	**	2.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		101%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042014.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

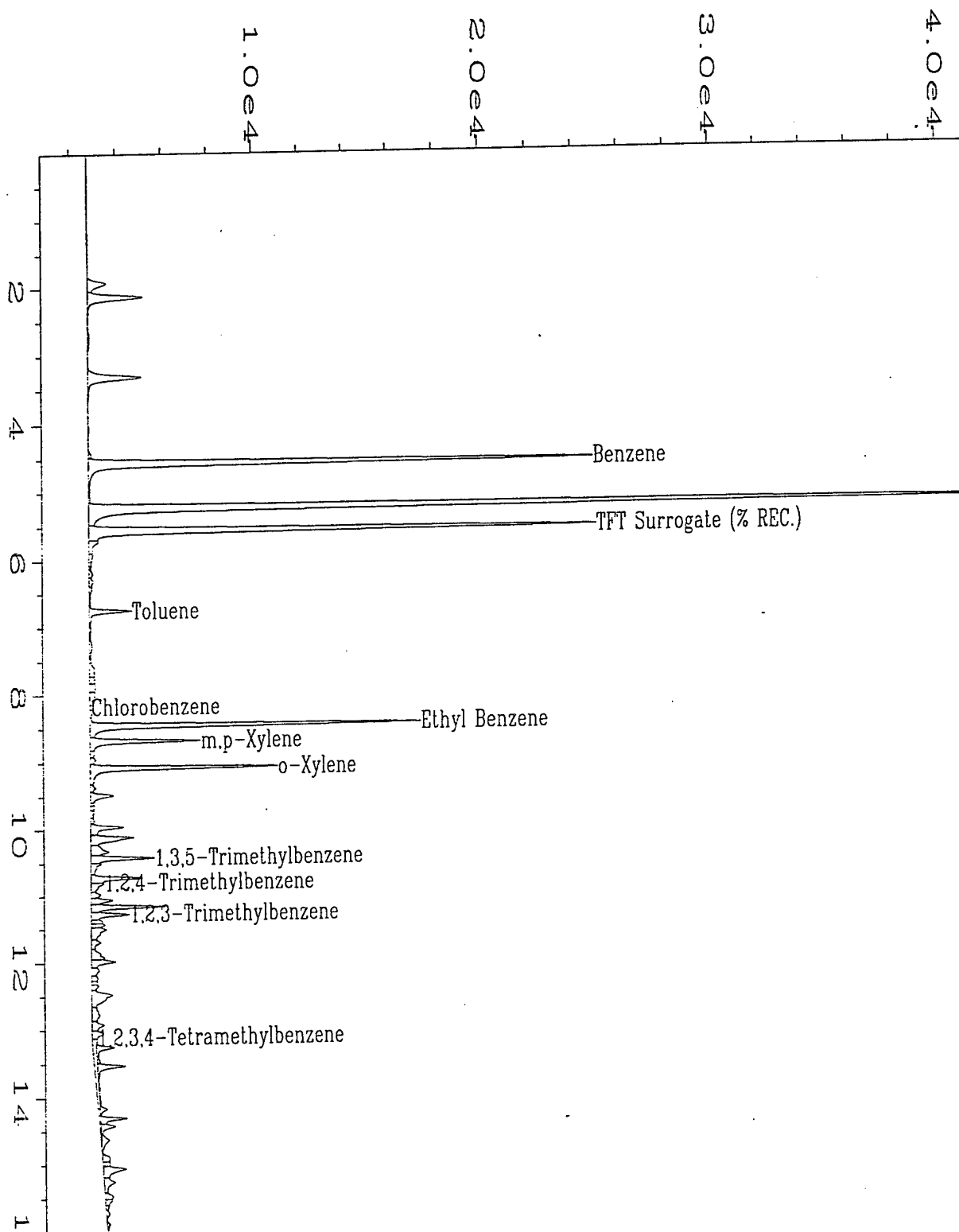
NA = Not Available/Not Applicable.

K. Cone

Analyst

A. McCall

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\011R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05830;5;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.MT
Acquired on	: 21 Apr 95 03:50 PM	Analysis Method	: BX20421.MT
Report Created on	: 22 Apr 95 12:52 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 5		
Sample Info	: 95-1240; MW-7; 1.0 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number : MW-10
Lab Sample Number : X05831
Date Sampled : 4/17/95
Date Received : 4/18/95
Date Prepared : 4/20/95
Date Analyzed : 4/20/95

Client Project No. : 722450.2602/SJAFB
Lab Project No. : 95-1240
Dilution Factor : 1.00
Method : 602
Matrix : Water
Lab File No. : BX2042015
Method Blank No. : MB042095

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	5.3	0.4
Chlorobenzene	108-90-7	0.7	0.4
Ethyl Benzene	100-41-4	2.6	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	4.4	0.4
1,3,5-Trimethylbenzene	108-67-8	0.8	0.4
1,2,4-Trimethylbenzene	95-63-6	8.0	0.4
1,2,3-Trimethylbenzene	526-73-8	0.9	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	4.0	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		98%	70%-130% (QC limits)

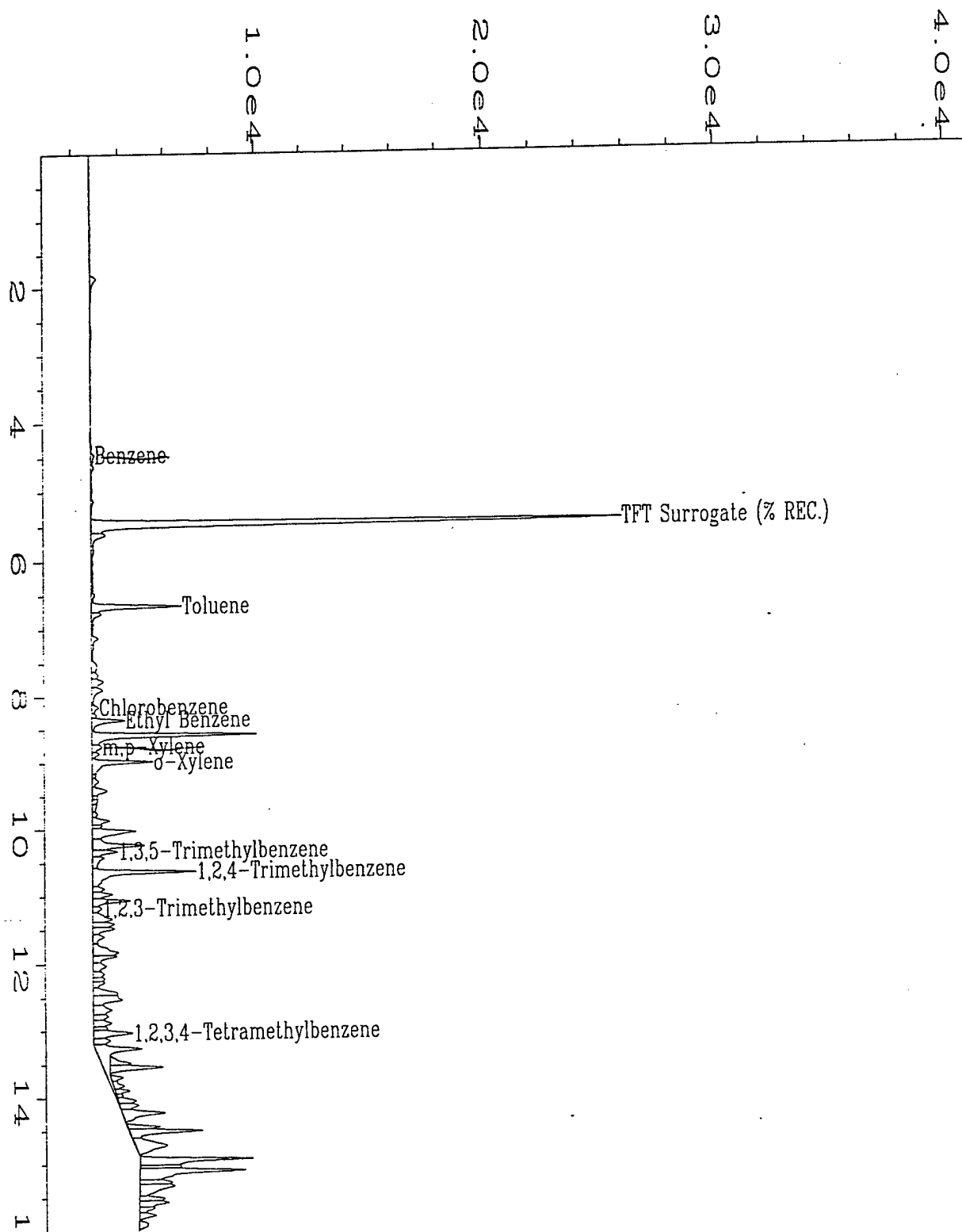
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20420\015R0101.D	Page Number	: 1
Operator	: KAPRIE S. CONE	Vial Number	: 15
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05831;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20420.MT
quired on	: 20 Apr 95 09:53 PM	Analysis Method	: BX20420.MT
Report Created on:	: 20 Apr 95 10:10 PM	Sample Amount	: 0
Last Recalib on	: 20 APR 95 05:30 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1240; MW-10; 5 ML WATER		

5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-11	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05832	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 10.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/20/95	Matrix	: Water
Date Analyzed	: 4/20/95	Lab File No.	: BX2042016
		Method Blank No.	: MB042095

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	4.0
Toluene	108-88-3	**	4.0
Chlorobenzene	108-90-7	37	4.0
Ethyl Benzene	100-41-4	**	4.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	4.0
1,3,5-Trimethylbenzene	108-67-8	180	4.0
1,2,4-Trimethylbenzene	95-63-6	**	4.0
1,2,3-Trimethylbenzene	526-73-8	140	4.0
1,2,3,4-Tetramethylbenzene	488-23-3	270	4.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		107%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042112 (DF = 100).

QUALIFIERS:

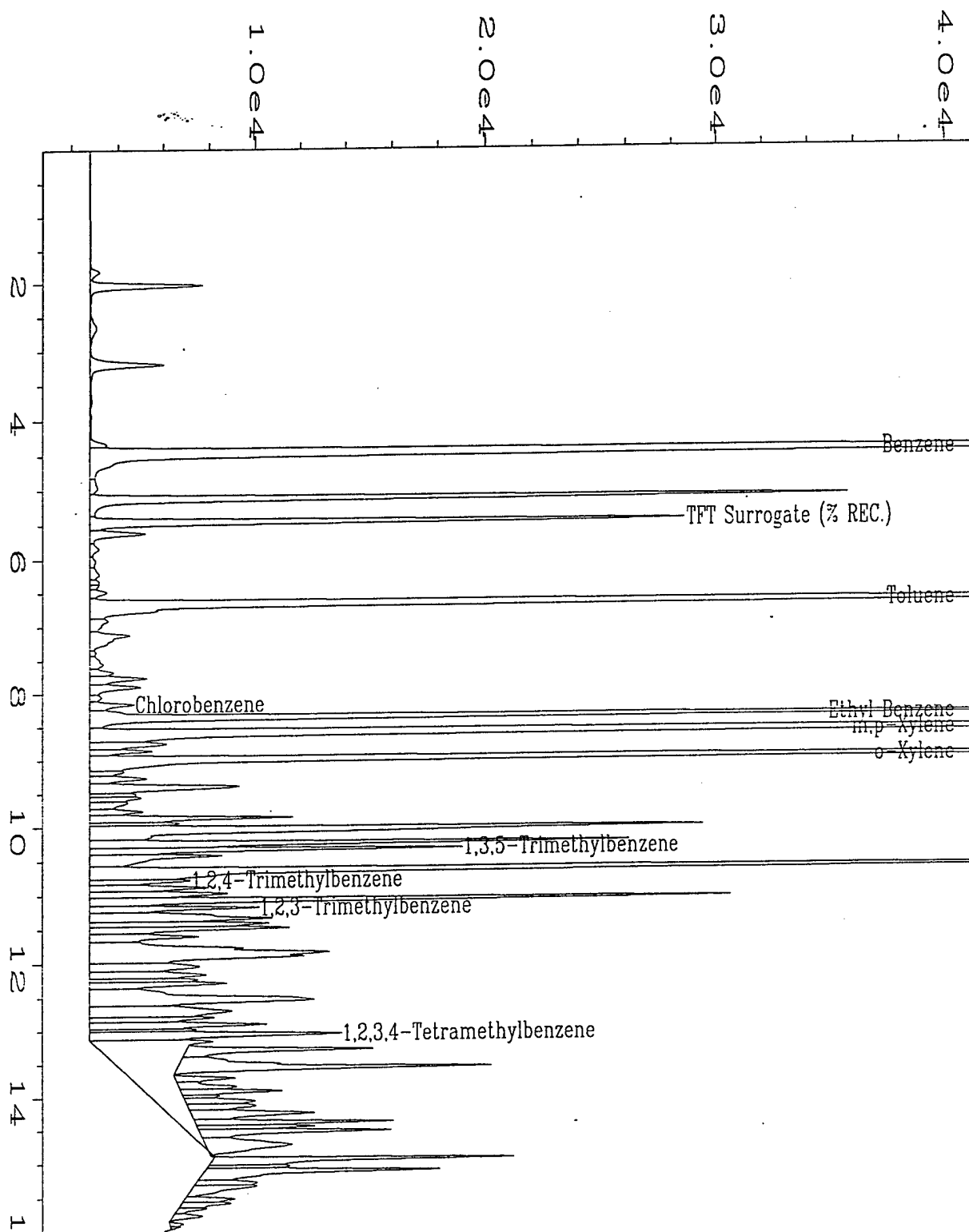
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone

Analyst

AmCille

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20420\016R0101.D	Page Number	: 1
Operator	: KAPRIE S. CONE	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05832;10;500UL	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	: BX20420.MT
quired on	: 20 Apr 95 10:30 PM	Analysis Method	: BX20420.MT
ort Created on:	: 20 Apr 95 10:46 PM	Sample Amount	: 0
Last Recalib on	: 20 APR 95 05:30 PM	ISTD Amount	:
Multiplier	: 10		
Sample Info	: 95-1240; MW-10; 500 UL WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-11	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05832	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 100.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042112
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	2300	40.0
Toluene	108-88-3	2000	40.0
Chlorobenzene	108-90-7	**	40.0
Ethyl Benzene	100-41-4	620	40.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	3700	40.0
1,3,5-Trimethylbenzene	108-67-8	**	40.0
1,2,4-Trimethylbenzene	95-63-6	610	40.0
1,2,3-Trimethylbenzene	526-73-8	**	40.0
1,2,3,4-Tetramethylbenzene	488-23-3	**	40.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		99%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042016 (DF = 10).

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

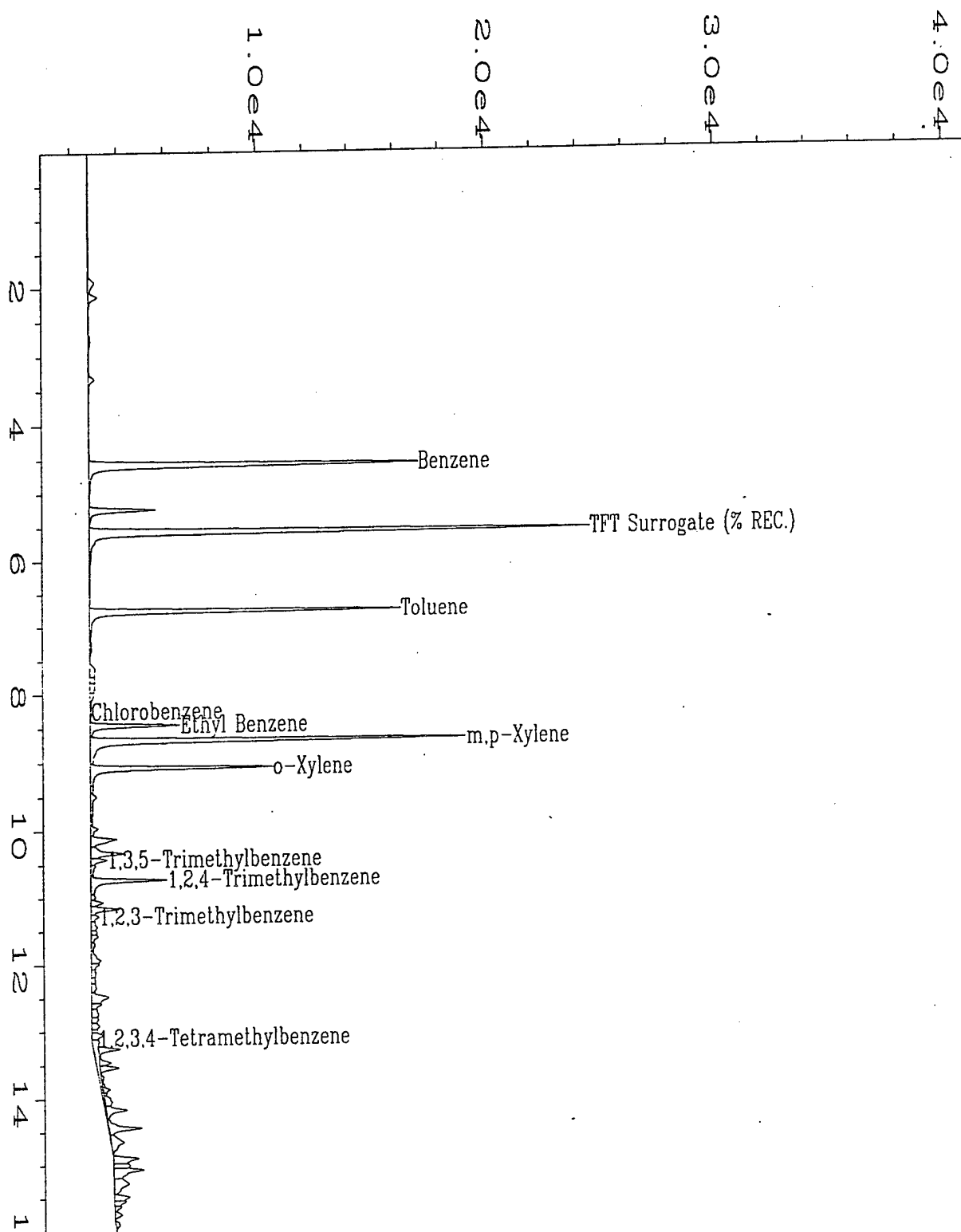
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\BX20421\012R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 12
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05832;100; ⁰² 0.050	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.MT
Acquired on	: 21 Apr 95 04:29 PM	Analysis Method	: BX20421.MT
Report Created on	: 21 Apr 95 04:46 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 100		
Sample Info	: 95-1240; MW-11; 0.050 ML WATER		

EVERGREEN ANALYTICAL, INC.
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Method 602 Data Report

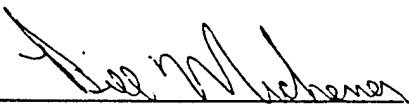
Client Sample Number	: Trip Blank	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05833	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 1.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/23/95	Matrix	: Water
Date Analyzed	: 4/23/95	Lab File No.	: BX1042312
		Method Blank No.	: MB042395

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.5	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		103%	70%-130% (QC limits)

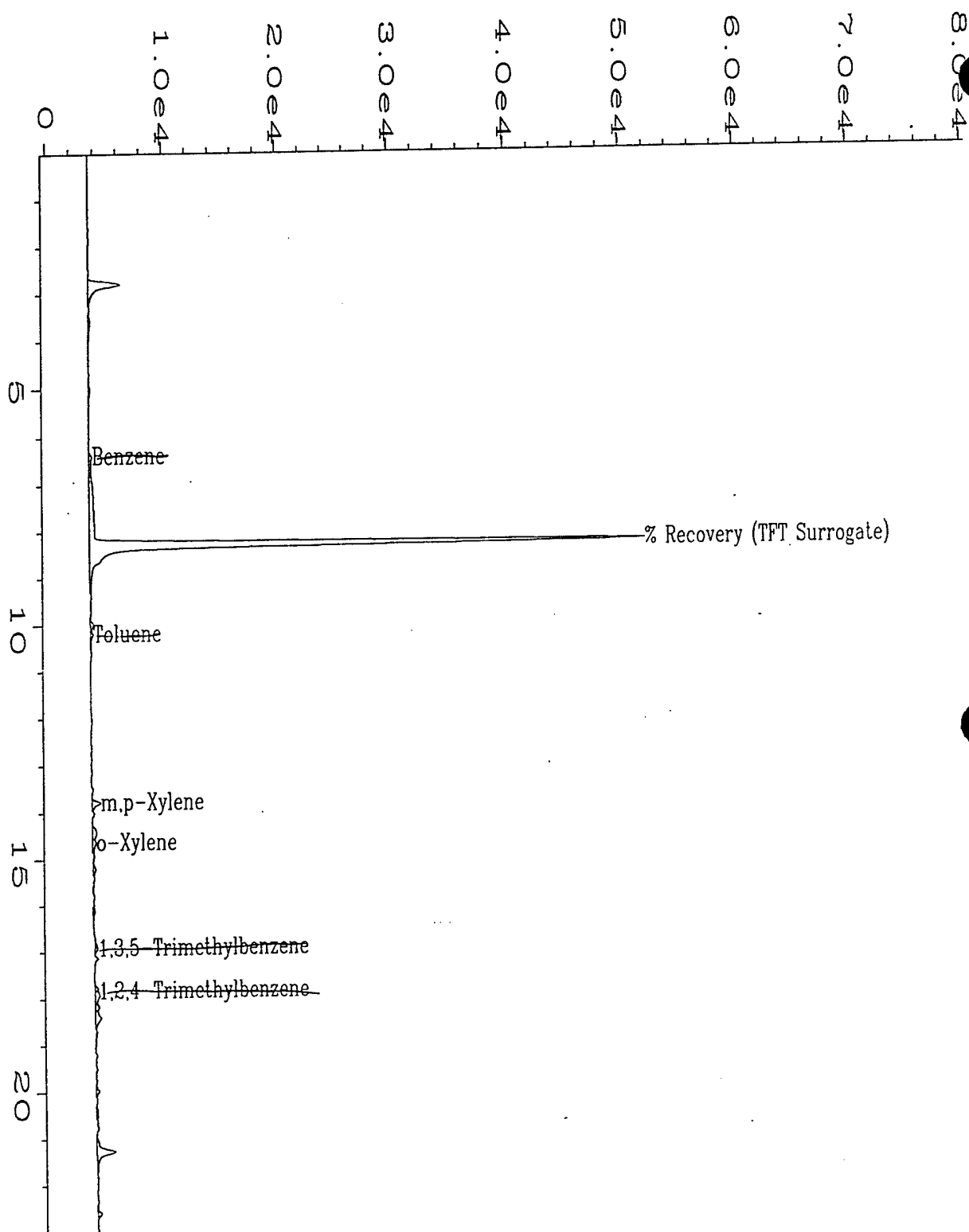
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


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user modified

Data File Name : E:\1\DATA\BX10423\012F0901.D
 Operator : SW Tyson
 Instrument : BTEX1
 Sample Name : X05833;1;5
 Print Time Bar Code:
 Acquired on : 23 Apr 95 04:03 PM
 Report Created on: 25 Apr 95 01:11 PM
 Last Recalib on : 24 APR 95 10:52 AM
 Multiplier : 1

Page Number : 1
 Vial Number : 12
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX10423.M
 Analysis Method : BX10423.M
 Sample Amount : 0
 ISTD Amount :

Am 5/10/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number : CPT-16
Lab Sample Number : X05834
Date Sampled : 4/17/95
Date Received : 4/18/95
Date Prepared : 4/20/95
Date Analyzed : 4/20/95

Client Project No. : 722450.2602/SJAFB
Lab Project No. : 95-1240
Dilution Factor : 10.00
Method : 602
Matrix : Water
Lab File No. : BX2042017
Method Blank No. : MB042095

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	4.0
Toluene	108-88-3	**	4.0
Chlorobenzene	108-90-7	U	4.0
Ethyl Benzene	100-41-4	**	4.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	4.0
1,3,5-Trimethylbenzene	108-67-8	110	4.0
1,2,4-Trimethylbenzene	95-63-6	590	4.0
1,2,3-Trimethylbenzene	526-73-8	260	4.0
1,2,3,4-Tetramethylbenzene	488-23-3	80	4.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		103%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

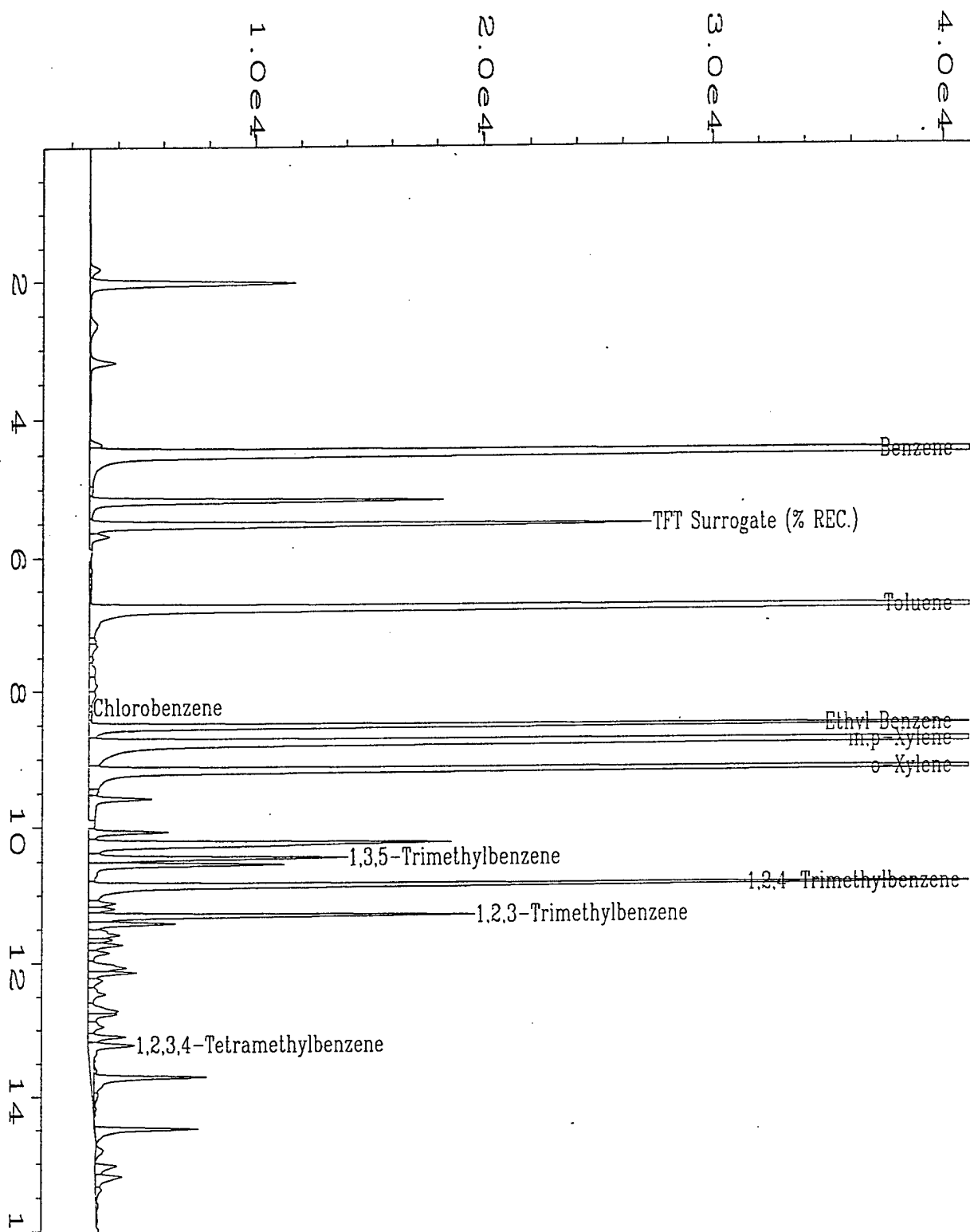
** = See BX2042113 (DF=100).

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


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Data File Name	: C:\HPCHEM\2\DATA\BX20420\017R0101.D	Page Number	: 1
Operator	: KAPRIE S. CONE	Vial Number	: 17
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05834;10;500UL	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20420.M
Acquired on	: 20 Apr 95 11:06 PM	Analysis Method	: BX20420.M
Report Created on	: 20 Apr 95 11:22 PM	Sample Amount	: 0
Last Recalib on	: 20 APR 95 05:30 PM	ISTD Amount	:
Multiplier	: 10		
Sample Info	: 95-1240; CPT-16; 500UL ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: CPT-16	Client Project No.	: 722450.2602/SJAFB
Lab Sample Number	: X05834	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	Dilution Factor	: 100.00
Date Received	: 4/18/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042113
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	2100	40.0
Toluene	108-88-3	2100	40.0
Chlorobenzene	108-90-7	**	40.0
Ethyl Benzene	100-41-4	560	40.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	4100	40.0
1,3,5-Trimethylbenzene	108-67-8	**	40.0
1,2,4-Trimethylbenzene	95-63-6	**	40.0
1,2,3-Trimethylbenzene	526-73-8	**	40.0
1,2,3,4-Tetramethylbenzene	488-23-3	**	40.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		99%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042017 (DF=10).

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

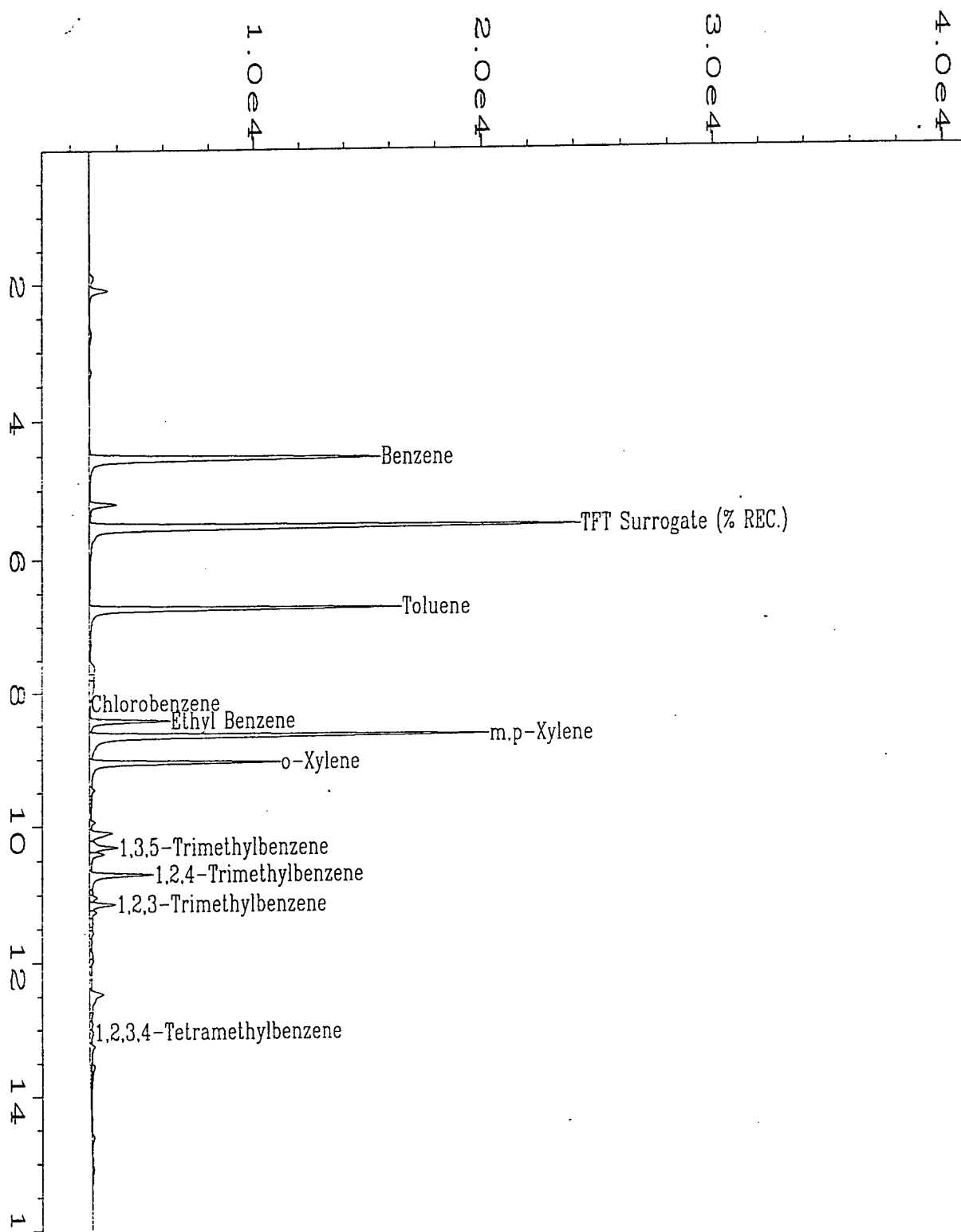
NA = Not Available/Not Applicable.

K. Cone

Analyst

P. McClellan

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\013R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05834;100;X0.050 <i>PK</i>	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20421 <i>IT</i>
Acquired on	: 21 Apr 95 05:06 PM	Analysis Method	: BX20421 <i>IT</i>
Report Created on:	21 Apr 95 05:22 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 100		
Sample Info	: 95-1240; CPT-16; 0.050 ML WATER		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-6	Client Project No.	: 722450.2602/SJAFB
Lab Sample No.	: X05829	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	EPA Method No.	: 602
Date Received	: 4/18/95	Matrix	: Water
Date Prepared	: 4/20/95	Lab File Number(s)	: BX2042011,12
Date Analyzed	: 4/20/95	Method Blank	: MB042095

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20.0	25.0	43.5	92.5	50-150
Toluene	20.0	1.0	20.7	98.5	50-148
Ethyl Benzene	20.0	0.0	19.6	98.0	50-150
m,p-Xylene	40.0	0.0	39.7	99.3	50-150
o-Xylene	20.0	0.0	20.0	100.0	50-150
Chlorobenzene	20.0	0.0	19.5	97.5	55-135
1,3,5-TMB	20.0	0.0	19.9	99.5	50-150
1,2,4-TMB	20.0	0.0	19.6	98.0	50-150
1,2,3-TMB	20.0	0.0	19.1	95.5	50-150
1,2,3,4-TeMB	20.0	0.0	21.1	105.5	50-150

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Benzene	20.0	42.5	87.5	5.6	25	50-150
Toluene	20.0	19.8	94.0	4.7	25	50-148
Ethyl Benzene	20.0	18.7	93.5	4.7	25	50-150
m,p-Xylene	40.0	37.8	94.5	4.9	25	50-150
o-Xylene	20.0	18.6	93.0	7.3	25	50-150
Chlorobenzene	20.0	18.6	93.0	4.7	25	55-135
1,3,5-TMB	20.0	18.3	91.5	8.4	25	50-150
1,2,4-TMB	20.0	18.2	91.0	7.4	25	50-150
1,2,3-TMB	20.0	17.9	89.5	6.5	25	50-150
1,2,3,4-TeMB	20.0	16.1	80.5	26.9 *	25	50-150

* = Values outside of QC limits.

RPD: 1 out of (10) outside limits.

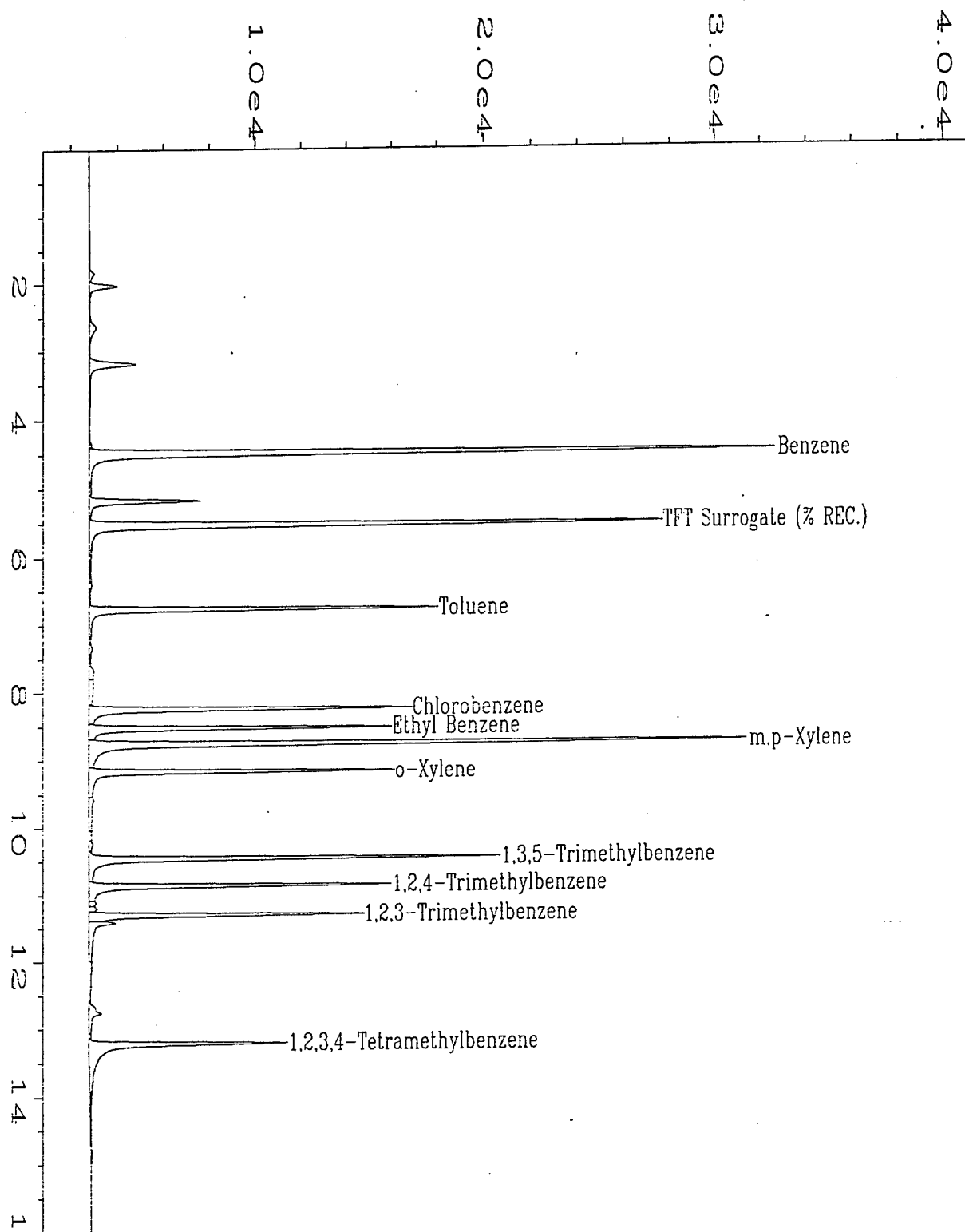
Spike Recovery: 0 out of (20) outside limits.

Comments: See LCS042095.

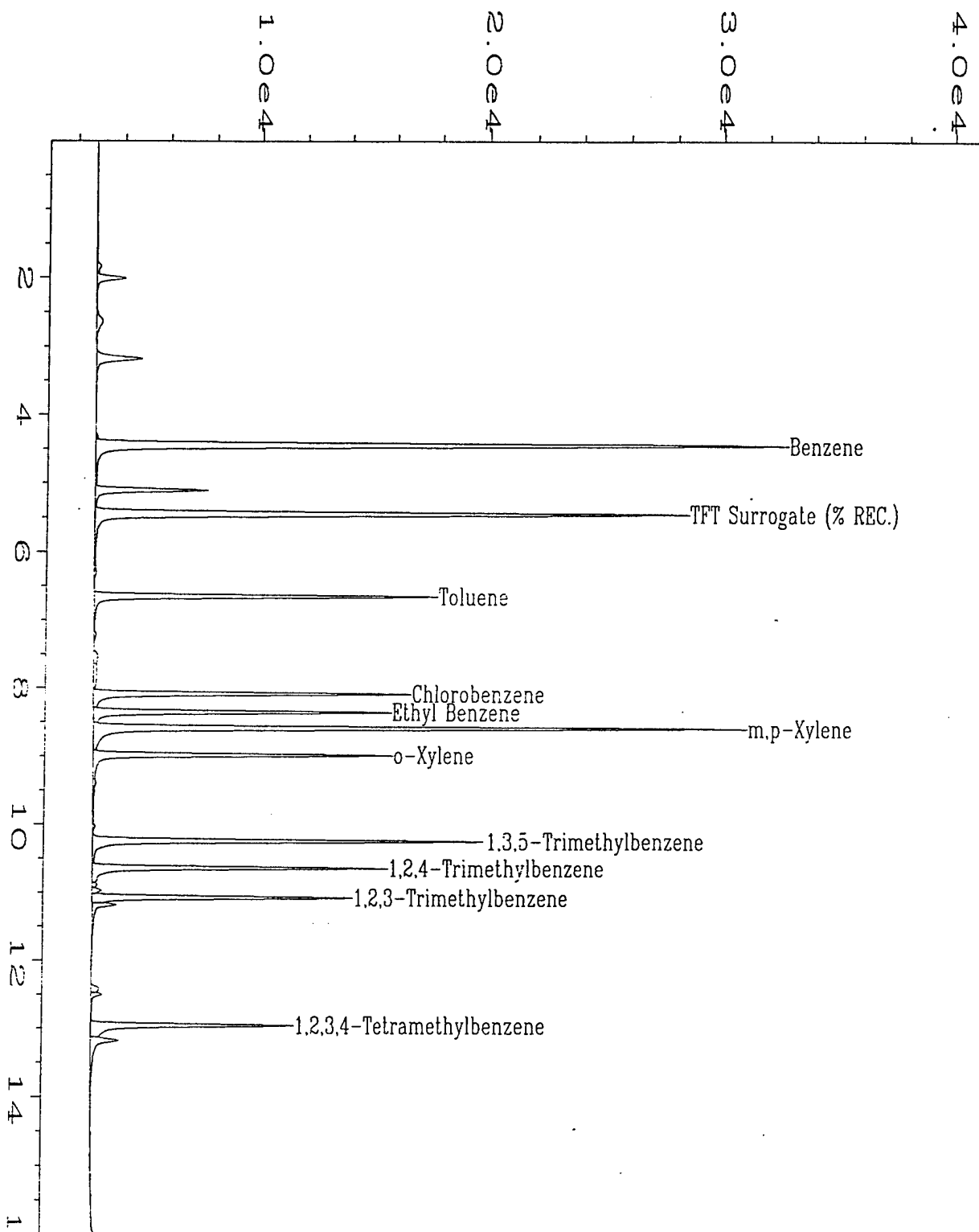
K. Cone
Analyst

Amelle
Approved

MS1240.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20420\011R0101.D	Page Number	: 1
Operator	: KAPRIE S. CONE	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05829MS;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	MT
quired on	: 20 Apr 95 07:30 PM	Analysis Method	: MT
ort Created on:	20 Apr 95 07:47 PM	Sample Amount	: 0
Last Recalib on	: 20 APR 95 05:30 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1240; MW-6; 5 ML WATER; 20 PPB SPIKE		



Data File Name	: C:\HPCHEM\2\DATA\BX20420\012R0101.D	Page Number	: 1
Operator	: KAPRIE S. CONE	Vial Number	: 12
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05829MSD;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20420.MTH
Acquired on	: 20 Apr 95 08:06 PM	Analysis Method	: BX20420.MTH
Report Created on	: 21 Apr 95 09:00 AM	Sample Amount	: 0
Last Recalib on	: 20 Apr 95 05:30 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042095	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/20/95	Method	: 602
Date Analyzed	: 4/20/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX10420008

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.8	89.0	71.0-119.0*
Toluene	108-88-3	18.6	93.0	73.0-111.0*
Chlorobenzene	108-90-7	18.5	92.5	64.0-119.0*
Ethyl Benzene	100-41-4	18.7	93.5	75.0-114.0*
m,p-Xylene	108-38-3	19.5	97.5	75.0-114.0*
o-Xylene	106-42-3			
	95-47-6	18.3	91.5	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	19.4	97.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.9	89.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	17.9	89.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	19.6	98.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		110%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:


E = Extrapolated value

U = Compound analyzed for, but not detected.

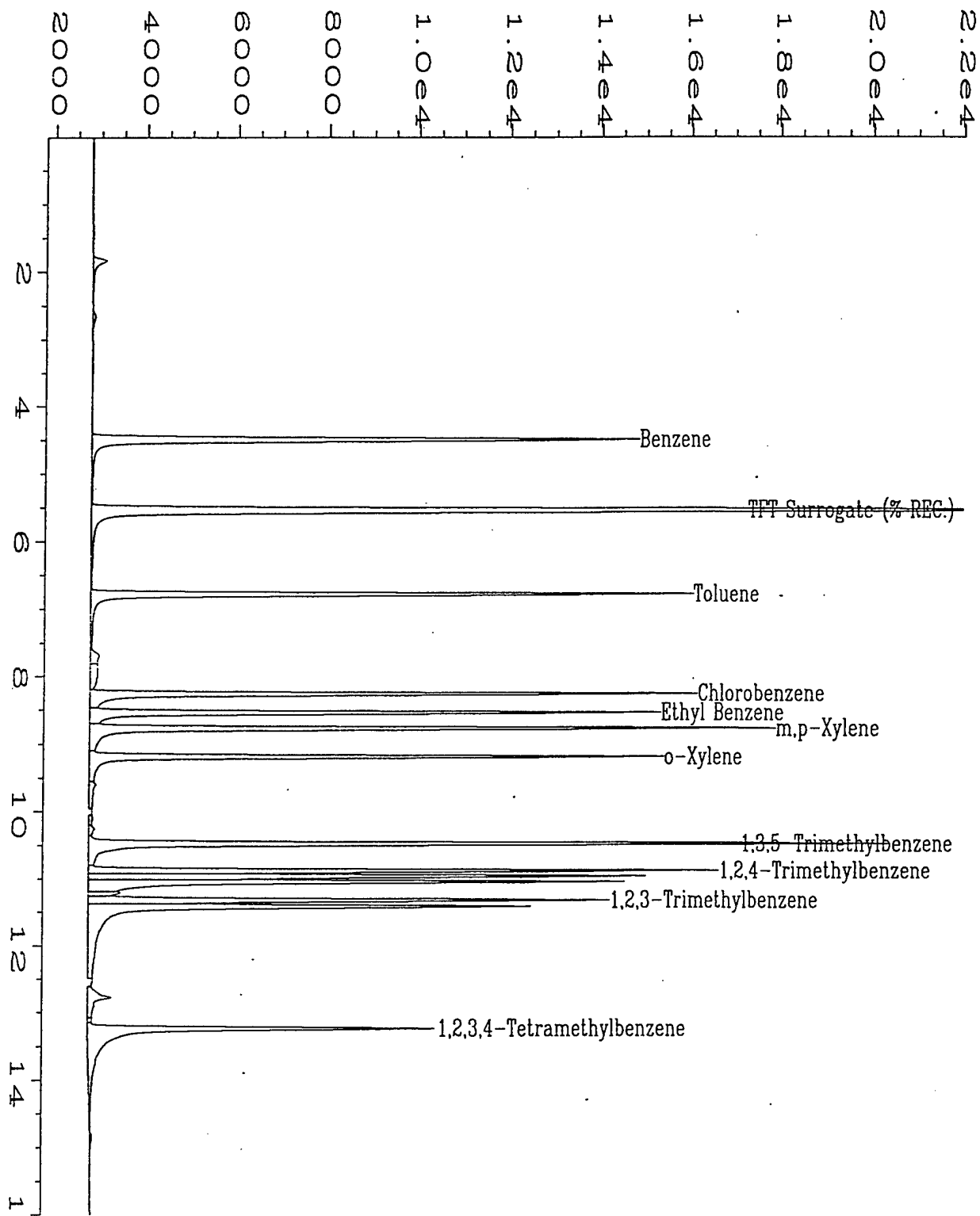
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

'A = Not available/Not analyzed.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20420\008R0101.D	Page Number	: 1
Operator	: KAPRIE S. CONE	Vial Number	: 8
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS042095	Sequence Line	: 1
Retention Time Bar Code:		Instrument Method	: BX20420.MTH
Acquired on	: 20 Apr 95 05:42 PM	Analysis Method	: BX20420.MTH
Report Created on:	: 20 Apr 95 05:58 PM	Sample Amount	: 0
Last Recalib on	: 20 APR 95 05:30 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: REF # 1649		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042195	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/21/95	Method	: 602
Date Analyzed	: 4/21/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX20421009

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.9	89.5	71.0-119.0*
Toluene	108-88-3	18.3	91.5	73.0-111.0*
Chlorobenzene	108-90-7	18.8	94.0	64.0-119.0*
Ethyl Benzene	100-41-4	18.7	93.5	75.0-114.0*
m,p-Xylene	108-38-3	19.6	98.0	75.0-114.0*
o-Xylene	106-42-3	18.8	94.0	64.0-111.0*
	95-47-6			
1,3,5-Trimethylbenzene	108-67-8	19.6	98.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.7	93.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.5	92.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		100%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

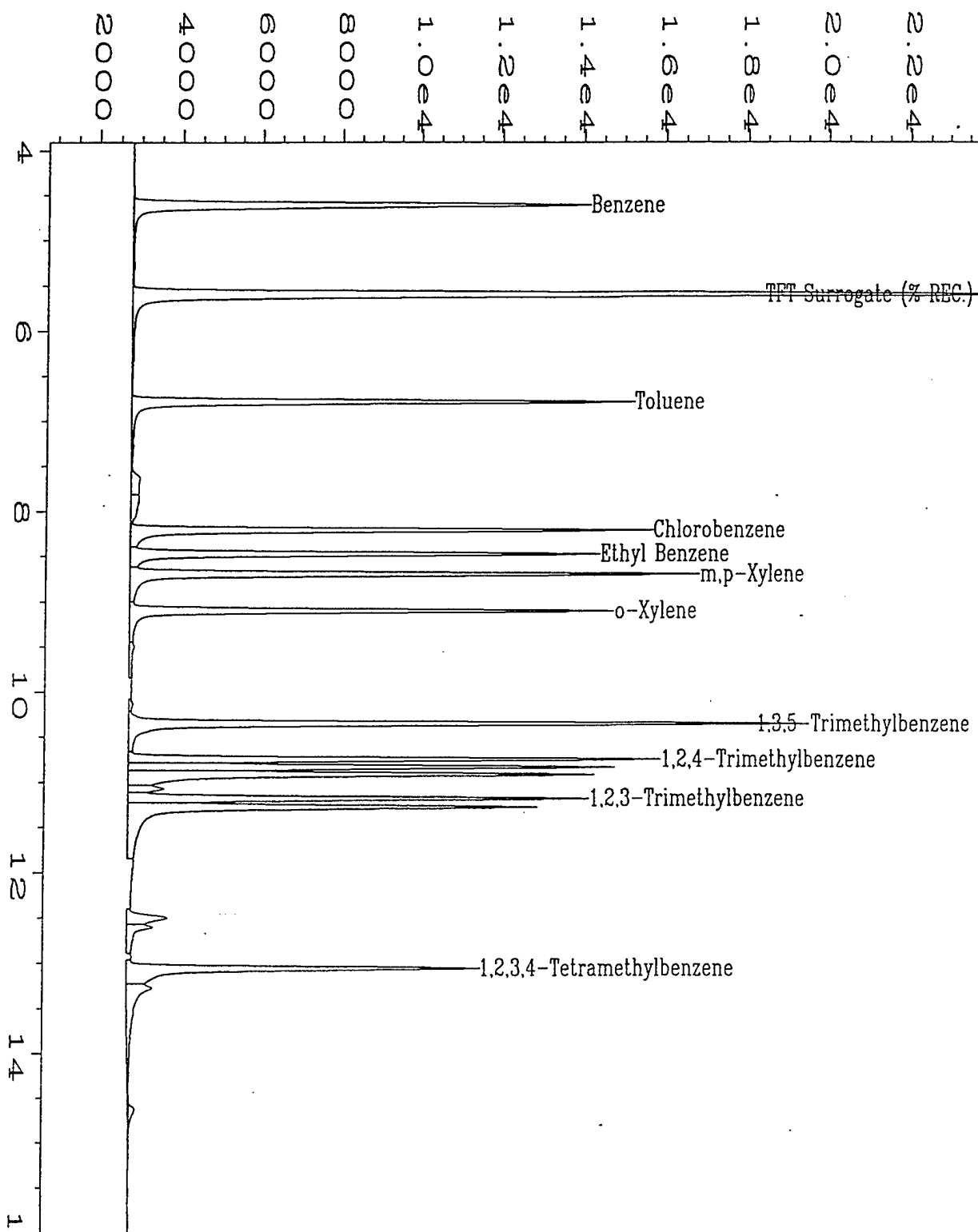
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

Analyst

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Data File Name	: C:\HPCHEM\2\DATA\BX20421\009R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS042195	Sequence Line	: 1
Time Bar Code:		Instrument Method	: BX20421.MTH
Printed on	: 21 Apr 95 02:25 PM	Analysis Method	: BX20421.MTH
Report Created on	: 21 Apr 95 02:54 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042395New	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/23/95	Method	: 602
Date Analyzed	: 4/23/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX1042311

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	19.1	95.5	71.0-119.0*
Toluene	108-88-3	19.9	99.5	73.0-111.0*
Chlorobenzene	108-90-7	19.7	98.5	64.0-119.0*
Ethyl Benzene	100-41-4	20.0	100.0	75.0-114.0*
m,p-Xylene	108-38-3	20.9	104.5	75.0-114.0*
o-Xylene	106-42-3	19.3	96.5	64.0-111.0*
	95-47-6			
1,3,5-Trimethylbenzene	108-67-8	21.6	108.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	21.8	109.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	23.3	116.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	20.2	101.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		92%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

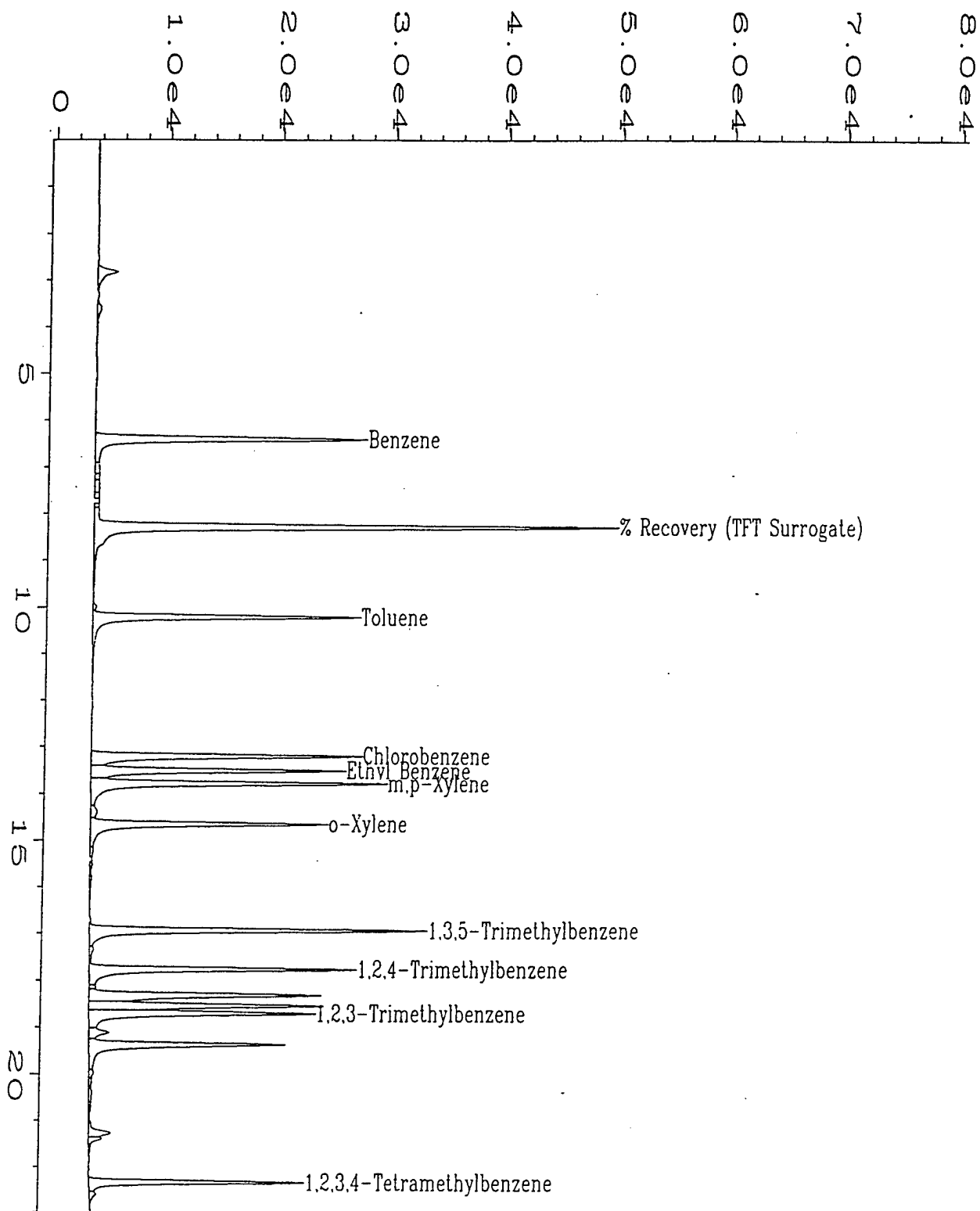
NA = Not available/Not analyzed.



Analyst



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Data File Name : E:\1\DATA\BX10423\011F0901.D
 Operator : SW Tyson
 Instrument : BTEX1
 Sample Name : New LCS 1667
 Time Bar Code:
 Acquired on : 23 Apr 95 03:22 PM
 Report Created on: 25 Apr 95 01:08 PM
 Last Recalib on : 24 APR 95 10:52 AM
 Multiplier : 1

Page Number : 1
 Vial Number : 11
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX10423.MTH
 Analysis Method : BX10423.MTH
 Sample Amount : 0
 ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042395	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/23/95	Method	: 602
Date Analyzed	: 4/23/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX1042309

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.4	87.0	71.0-119.0*
Toluene	108-88-3	18.0	90.0	73.0-111.0*
Chlorobenzene	108-90-7	16.5	82.5	64.0-119.0*
Ethyl Benzene	100-41-4	18.3	91.5	75.0-114.0*
m,p-Xylene	108-38-3	18.9	94.5	75.0-114.0*
o-Xylene	106-42-3	17.0	85.0	64.0-111.0*
	95-47-6			
1,3,5-Trimethylbenzene	108-67-8	18.2	91.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.2	91.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.1	95.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	13.1	65.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		96%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

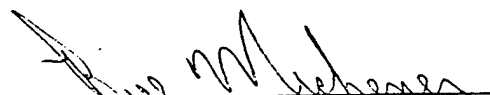
E = Extrapolated value

U = Compound analyzed for, but not detected.

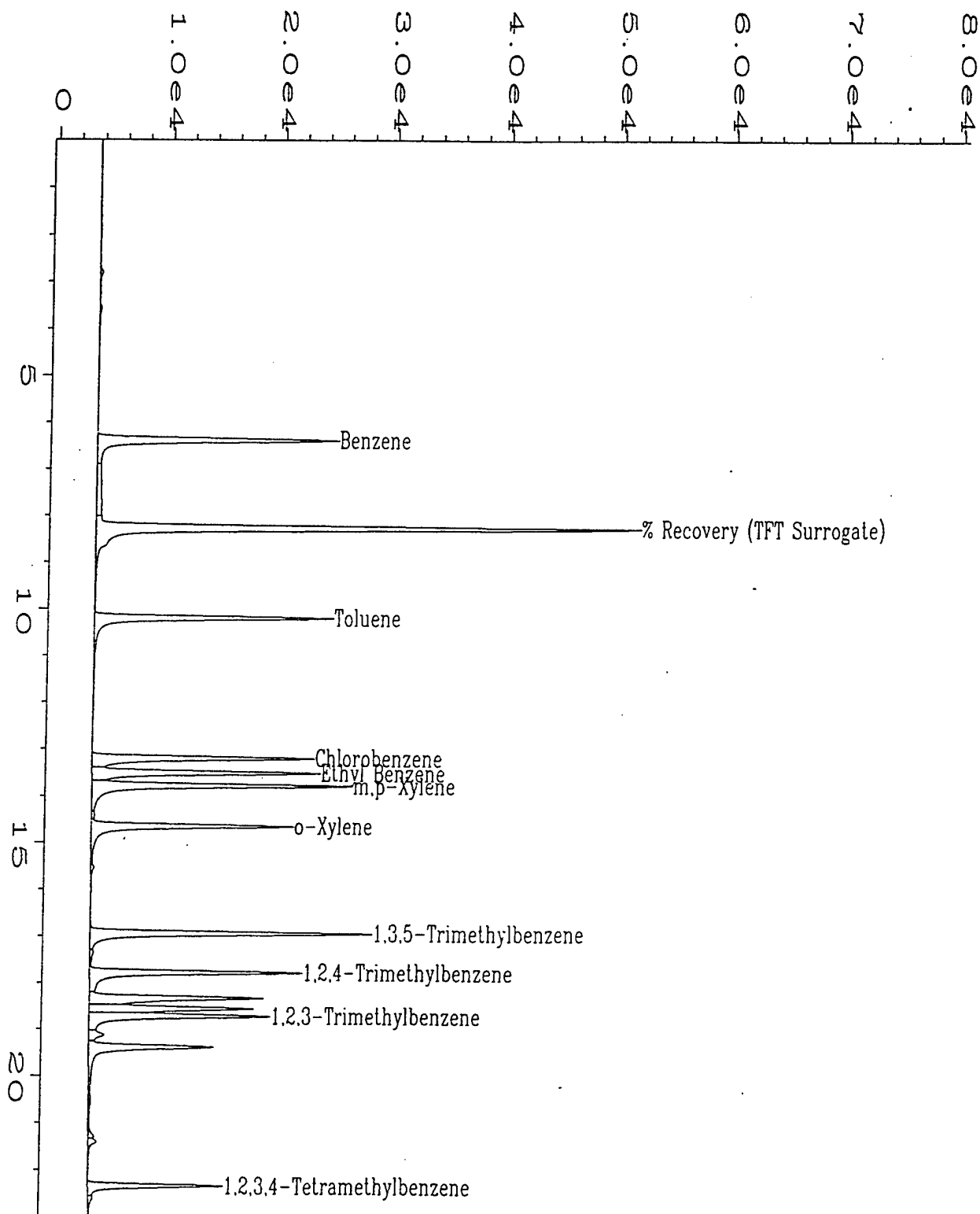
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.


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Data File Name : E:\1\DATA\BX10423\009F0901.D
 Operator : SW Tyson
 Instrument : BTEX1
 Sample Name : LCS042395
 Time Bar Code:
 Acquired on : 23 Apr 95 02:01 PM
 Report Created on: 25 Apr 95 01:02 PM
 Last Recalib on : 24 APR 95 10:52 AM
 Multiplier : 1

Page Number : 1
 Vial Number : 9
 Injection Number : 1
 Sequence Line : 9
 Instrument Method: BX10423.MTH
 Analysis Method : BX10423.MTH
 Sample Amount : 0
 ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-11	Client I.D.	: 722450.2
Lab Sample Number	: X05832		: SJAFB
Date Sampled	: 04/17/95	Lab Project No.	: 95-1240
Date Received	: 04/18/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0487
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	1,700 E	0.5
Toluene	108-88-3	1,400 E	0.5
Ethyl Benzene	100-41-4	650 E	0.5
Total Xylenes	1330-20-7	3,100 E	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	160	0.5
1,2,4-Trimethylbenzene	526-73-8	430 E	0.5
1,2,3-Trimethylbenzene	108-67-8	200	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	17	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	32	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	31	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:

1,2 Dichloroethane-d4	98%
Toluene-d8	94%
Bromofluorobenzene	95%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent w:
E = Compound is detected but concentration is outside of calibration limit:
NA = Not applicable or not available.

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4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-11	Client I.D.	: 722450.2602 /
Lab Sample Number	: X05832		: SJAFB
Date Sampled	: 04/17/95	Lab Project No.	: 95-1240
Date Received	: 04/18/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0487
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	3 B	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	290	1.0
1,1-Dichloroethane	75-34-3	440 E	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	120	1.0
Chloroform	67-66-3	U	1.0
1,2-Dichloroethane	107-06-2	20	1.0
2-Butanone	78-93-3	20	10.0
1,1,1-Trichloroethane	71-55-6	250	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	U	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	770 E	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	1,700 E	0.5
Dibromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	1,400 E	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	650 E	0.5
Styrene	100-42-5	U	1.0
Total Xylenes	1330-20-7	3,100 E	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:

1,2 Dichloroethane-d4	98%	QC Limits	{83-112}
Toluene-d8	94%		{93-104}
Bromofluorobenzene	95%		{87-105}

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
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E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-11	Client I.D.	: 722450.26
Lab Sample Number	: X05832		: SJAFB
Date Sampled	: 04/17/95	Lab Project No.	: 95-1240
Date Received	: 04/18/95	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0502
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	2,200	2.5
Toluene	108-88-3	1,900	2.5
Ethyl Benzene	100-41-4	680	2.5
Total Xylenes	1330-20-7	3,900	2.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	130	2.5
1,2,4-Trimethylbenzene	526-73-8	440	2.5
1,2,3-Trimethylbenzene	108-67-8	190	2.5
1,2,3,4-Tetramethylbenzene	488-23-3	19	5.0
Methyl-t-butyl ether (MTBE)	156-60-5	U	5.0
Chlorobenzene	108-90-7	U	5.0
Styrene	100-42-5	U	5.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	5.0
Isopropyl ether	108-20-3	28	5.0
1,2-Dibromoethane (EDB)	106-93-4	U	5.0
1,3-Dichlorobenzene	541-73-1	U	5.0
1,2-Dichlorobenzene	95-50-1	U	5.0
1,4-Dichlorobenzene	106-46-7	U	5.0

Surrogate Recoveries:

1,2 Dichloroethane-d4
Toluene-d8
Bromofluorobenzene

94%
97%
94%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

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4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number : MW-11 Client I.D. : 722450.2602 /
Lab Sample Number : X05832 SJAFFB
Date Sampled : 04/17/95 Lab Project No. : 95-1240
Date Received : 04/18/95 Effective Dilution : 5.00
Date Extracted/Prepared : 05/02/95 Method : 624
Date Analyzed : 05/02/95 Matrix : WATER
Lab File No. : >L0502
Method Blank No. : RB050295

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
1,1-Dichloroethene	75-35-4	300	5.0
1,1-Dichloroethane	75-34-3	440	5.0
Cis-1,2-Dichloroethene	156-59-2	120	5.0
1,1,1-Trichloroethane	71-55-6	200	2.5
Trichloroethene	79-01-6	850	5.0
Benzene	71-43-2	2,200	2.5
Toluene	108-88-3	1,900	2.5
Ethyl Benzene	100-41-4	680	2.5
Total Xylenes	1330-20-7	3,900	2.5

Surrogate Recoveries:

1,2 Dichloroethane-d4 94%
Toluene-d8 97%
Bromofluorobenzene 94%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water
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NA = Not applicable or not available.

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
METHOD BLANK REPORT

GC Confirmation and Additional Compounds
Method Blank Number : RB050195 Client I.D. : 722450.2
Date Extracted/Prepared : 05/01/95 SJAFB
Date Analyzed : 05/01/95 Lab Project No. : 95-1240
Effective Dilution : 1.00
Method : 624
Lab File No. : >L0486

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	U	0.5
Toluene	108-88-3	U	0.5
Ethyl Benzene	100-41-4	U	0.5
Total Xylenes	1330-20-7	U	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	U	0.5
1,2,4-Trimethylbenzene	526-73-8	U	0.5
1,2,3-Trimethylbenzene	108-67-8	U	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	U	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	U	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	U	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:

1,2 Dichloroethane-d4 104%
Toluene-d8 102%
Bromofluorobenzene 98%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
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* = Reporting limits are roughly the method detection limits for reagent w
E = Compound is detected but concentration is outside of calibration limit
NA = Not applicable or not available.

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4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
METHOD BLANK REPORT
Target Compound List

Method Blank Number : RB050195 Client I.D. : 722450.2602 /
Date Extracted/Prepared : 05/01/95 SJAFB
Date Analyzed : 05/01/95 Lab Project No. : 95-1240
Effective Dilution : 1.00
Method : 624
Lab File No. : >L0486

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	3	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	U	1.0
1,1-Dichloroethane	75-34-3	U	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	U	1.0
Chloroform	67-66-3	2	1.0
1,2-Dichloroethane	107-06-2	U	1.0
2-Butanone	78-93-3	U	10.0
1,1,1-Trichloroethane	71-55-6	U	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	U	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	U	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	U	0.5
Dibromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	U	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	U	0.5
Styrene	100-42-5	U	1.0
Total Xylenes	1330-20-7	U	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:

QC Limits

1,2 Dichloroethane-d4	104%	(83-112)
Toluene-d8	102%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

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VOLATILE ORGANICS ANALYSIS DATA

METHOD BLANK REPORT

GC Confirmation and Additional Compounds

Method Blank Number	: RB050295	Client I.D.	: 722450.2
Date Extracted/Prepared	: 05/02/95		: SJAFB
Date Analyzed	: 05/02/95	Lab Project No.	: 95-1240
		Effective Dilution	: 1.00
		Method	: 624
		Lab File No.	: >L0501

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	U	0.5
Toluene	108-88-3	U	0.5
Ethyl Benzene	100-41-4	U	0.5
Total Xylenes	1330-20-7	U	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	U	0.5
1,2,4-Trimethylbenzene	526-73-8	U	0.5
1,2,3-Trimethylbenzene	108-67-8	U	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	U	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	U	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	U	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:

		QC Limits
1,2 Dichloroethane-d4	103%	(83-112)
Toluene-d8	99%	(93-104)
Bromofluorobenzene	95%	(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA

METHOD BLANK REPORT

Method Blank Number : RB050295 Client I.D. : 722450.2602 /
Date Extracted/Prepared : 05/02/95 SJA
Date Analyzed : 05/02/95 Lab Project No. : 95-1240
Effective Dilution : 1.00
Method : 624
Lab File No. : >L0501

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	3	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	U	1.0
1,1-Dichloroethane	75-34-3	U	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	U	1.0
Chloroform	67-66-3	2	1.0
1,2-Dichloroethane	107-06-2	U	1.0
2-Butanone	78-93-3	U	10.0
1,1,1-Trichloroethane	71-55-6	U	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	1	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	U	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	U	0.5
Dibromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	U	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	U	0.5
Styrene	100-42-5	U	1.0
Total Xylenes	1330-20-7	U	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:

1,2 Dichloroethane-d4 103%
Toluene-d8 99%
Bromofluorobenzene 95%

QC Limits

{83-112}
{93-104}
{87-105}

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: SAMPLE REF	Client I.D.	: 722450.26
Lab Sample Number	: X05933MS		SJAFB
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0494
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	480	152%
Toluene	108-88-3	45	95%
Ethyl Benzene	100-41-4	250	78%
Total Xylenes	1330-20-7	340	108%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	47 NS	---
1,2,4-Trimethylbenzene	526-73-8	110 NS	---
1,2,3-Trimethylbenzene	108-67-8	30 NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	31 NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	34	74%
Chlorobenzene	108-90-7	21	103%
Styrene	100-42-5	23	116%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	REC %
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	4 NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	20	100%
1,2-Dichlorobenzene	95-50-1	21	103%
1,4-Dichlorobenzene	106-46-7	19	95%

Surrogate Recoveries:

1,2 Dichloroethane-d4	101%
Toluene-d8	97%
Bromofluorobenzene	98%

QC Limits

{83-112}
{93-104}
{87-105}

QUALIFIERS:

NS = Not spiked.
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: SAMPLE REF	Client I.D.	: 722450.2602 /
Lab Sample Number	: X05933MS		SJAFB
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0494
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L	REC %
Chloromethane	74-87-3	12	62%
Bromomethane	74-83-9	18 B	80%
Vinyl Chloride	75-01-4	12	60%
Chloroethane	75-00-3	17	85%
Methylene Chloride	75-09-2	22	110%
Acetone	67-64-1	24	120%
Carbon Disulfide	75-15-0	19	94%
1,1-Dichloroethene	75-35-4	23	110%
1,1-Dichloroethane	75-34-3	21	103%
Trans-1,2-Dichloroethene	156-60-5	20	98%
Cis-1,2-Dichloroethene	156-59-2	320	109%
Chloroform	67-66-3	25 B	123%
1,2-Dichloroethane	107-06-2	21	84%
2-Butanone	78-93-3	21	103%
1,1,1-Trichloroethane	71-55-6	18	88%
Carbon Tetrachloride	56-23-5	19	93%
Bromodichloromethane	75-27-4	19	95%
Vinyl Acetate	108-05-4	17	85%
1,2-Dichloropropane	78-87-5	22	108%
Trans-1,3-Dichloropropene	10061-02-6	10	48%
Trichloroethene	79-01-6	180	88%
1,1,2-Trichloroethane	79-00-5	21	105%
Benzene	71-43-2	480	152%
Dibromochloromethane	124-48-1	19	97%
Cis-1,3-Dichloropropene	10061-01-5	18	92%
2-Chloroethylvinyl Ether	110-75-8	1	7%
Bromoform	75-25-2	17	84%
4-Methyl-2-Pentanone	108-10-1	17	84%
2-Hexanone	591-78-6	23	113%
1,1,2,2-Tetrachloroethane	79-34-5	18	90%
Tetrachloroethene	127-18-4	20	99%
Toluene	108-88-3	45	95%
Chlorobenzene	108-90-7	21	103%
Ethyl Benzene	100-41-4	250	78%
Styrene	100-42-5	23	116%
Total Xylenes	1330-20-7	340	108%
Trichlorofluoromethane	75-69-4	18	91%

Surrogate Recoveries:

1,2 Dichloroethane-d4	101%
Toluene-d8	97%
Bromofluorobenzene	98%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: SAMPLE REF	Client I.D.	: 722450.2600
Lab Sample Number	: X05923MS	Lab Project No.	: 95-1240
Date Sampled	: NA	Effective Dilution	: 5.00
Date Received	: NA	Method	: 624
Date Extracted/Prepared	: 05/02/95	Matrix	: WATER
Date Analyzed	: 05/02/95	Lab File No.	: >L0505
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	890	56%
Toluene	108-88-3	110	101%
Ethyl Benzene	100-41-4	190	92%
Total Xylenes	1330-20-7	120	74%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	NS	---
1,2,4-Trimethylbenzene	526-73-8	13 NS	---
1,2,3-Trimethylbenzene	108-67-8	5 NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	23 NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	48	48%
Chlorobenzene	108-90-7	100	100%
Styrene	100-42-5	4	4%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	28 NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	100	100%
1,2-Dichlorobenzene	95-50-1	100	100%
1,4-Dichlorobenzene	106-46-7	94	94%

Surrogate Recoveries:

1,2 Dichloroethane-d4	99%
Toluene-d8	97%
Bromofluorobenzene	96%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

NS = Not spiked.
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

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VOLATILE ORGANICS ANALYSIS DATA

Client Sample Number : SAMPLE REF Client I.D. : 722450.2602 /
Lab Sample Number : X05923MS SJAFB
Date Sampled : NA Lab Project No. : 95-1240
Date Received : NA Effective Dilution : 5.00
Date Extracted/Prepared : 05/02/95 Method : 624
Date Analyzed : 05/02/95 Matrix : WATER
Lab File No. : >L0505
Method Blank No. : RB050295

Compound Name	Cas Number	Conc. ug/L	REC %
Chloromethane	74-87-3	54	54%
Bromomethane	74-83-9	89 B	89%
Vinyl Chloride	75-01-4	61	61%
Chloroethane	75-00-3	89	89%
Methylene Chloride	75-09-2	110	110%
Acetone	67-64-1	142	142%
Carbon Disulfide	75-15-0	100	100%
1,1-Dichloroethene	75-35-4	130	130%
1,1-Dichloroethane	75-34-3	120	120%
Trans-1,2-Dichloroethene	156-60-5	99	99%
Cis-1,2-Dichloroethene	156-59-2	140	140%
Chloroform	67-66-3	130 B	130%
1,2-Dichloroethane	107-06-2	110	110%
2-Butanone	78-93-3	95	95%
1,1,1-Trichloroethane	71-55-6	97	97%
Carbon Tetrachloride	56-23-5	100	100%
Bromodichloromethane	75-27-4	96 B	96%
Vinyl Acetate	108-05-4	63	63%
1,2-Dichloropropane	78-87-5	100	100%
Trans-1,3-Dichloropropene	10061-02-6	54	54%
Trichloroethene	79-01-6	190	190%
1,1,2-Trichloroethane	79-00-5	100	100%
Benzene	71-43-2	890	56%
Bromochloromethane	124-48-1	92	92%
Cis-1,3-Dichloropropene	10061-01-5	98	98%
2-Chloroethylvinyl Ether	110-75-8	21	21%
Bromoform	75-25-2	82	82%
4-Methyl-2-Pentanone	108-10-1	90	90%
2-Hexanone	591-78-6	82	82%
1,1,2,2-Tetrachloroethane	79-34-5	84	84%
Tetrachloroethene	127-18-4	110	110%
Toluene	108-88-3	110	110%
Chlorobenzene	108-90-7	100	100%
Ethyl Benzene	100-41-4	190	190%
Styrene	100-42-5	4	4%
Total Xylenes	1330-20-7	120	120%
Trichlorofluoromethane	75-69-4	94	94%

Surrogate Recoveries:

1,2 Dichloroethane-d4 99%
Toluene-d8 97%
Bromofluorobenzene 96%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: 624 REF	Client I.D.	: 722450.2002
Lab Sample Number	: 624 REF		SJAFB
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0506
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	22	109%
Toluene	108-88-3	21	105%
Ethyl Benzene	100-41-4	22	109%
Total Xylenes	1330-20-7	24	118%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	NS	---
1,2,4-Trimethylbenzene	526-73-8	NS	---
1,2,3-Trimethylbenzene	108-67-8	NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	8	40%
Chlorobenzene	108-90-7	23	114%
Styrene	100-42-5	22	110%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	22	108%
1,2-Dichlorobenzene	95-50-1	22	108%
1,4-Dichlorobenzene	106-46-7	20	102%

Surrogate Recoveries:

1,2 Dichloroethane-d4	107%
Toluene-d8	100%
Bromofluorobenzene	98%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

NS = Not spiked.

U = Compound analyzed for, but not detected above the reporting limit.

B = Compound found in blank and sample. Compare blank and sample data.

* = Reporting limits are roughly the method detection limits for reagent wa

E = Compound is detected but concentration is outside of calibration limits

NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA

Client Sample Number	: 624 REF	Client I.D.	: 722450.2602 /
Lab Sample Number	: 624 REF		
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0506
		Method Blank No.	: RB050295

Compound Name	Cas Number	Conc. ug/L	REC %
Chloromethane	74-87-3	11	56%
Bromomethane	74-83-9	19 B	97%
Vinyl Chloride	75-01-4	13	64%
Chloroethane	75-00-3	19	95%
Methylene Chloride	75-09-2	23	115%
Acetone	67-64-1	29	145%
Carbon Disulfide	75-15-0	21	107%
1,1-Dichloroethene	75-35-4	25	127%
1,1-Dichloroethane	75-34-3	22	111%
Trans-1,2-Dichloroethene	156-60-5	21	106%
Cis-1,2-Dichloroethene	156-59-2	23	116%
Chloroform	67-66-3	26 B	128%
1,2-Dichloroethane	107-06-2	23	115%
2-Butanone	78-93-3	22	108%
1,1,1-Trichloroethane	71-55-6	20	99%
Carbon Tetrachloride	56-23-5	22	112%
Bromodichloromethane	75-27-4	21 B	104%
Vinyl Acetate	108-05-4	6	32%
1,2-Dichloropropane	78-87-5	22	112%
Trans-1,3-Dichloropropene	10061-02-6	12	62%
Trichloroethene	79-01-6	25	124%
1,1,2-Trichloroethane	79-00-5	22	112%
Benzene	71-43-2	22	109%
Dibromochloromethane	124-48-1	21	103%
Cis-1,3-Dichloropropene	10061-01-5	22	112%
2-Chloroethylvinyl Ether	110-75-8	4	19%
Bromoform	75-25-2	18	89%
4-Methyl-2-Pentanone	108-10-1	22	110%
2-Hexanone	591-78-6	21	106%
1,1,2,2-Tetrachloroethane	79-34-5	19	94%
Tetrachloroethene	127-18-4	23	117%
Toluene	108-88-3	21	105%
Chlorobenzene	108-90-7	23	114%
Ethyl Benzene	100-41-4	22	109%
Styrene	100-42-5	22	110%
Total Xylenes	1330-20-7	24	118%
Trichlorofluoromethane	75-69-4	20	100%

Surrogate Recoveries:

1,2 Dichloroethane-d4	107%
Toluene-d8	100%
Bromofluorobenzene	98%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: TMB LFB	Client I.D.	: 722450.2
Lab Sample Number	: TMB LFB		: SJAFB
Date Sampled	: NA	Lab Project No.	: 95-1240
Date Received	: NA	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0507
		Method Blank No.	: TMB LFB

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	NS	---
Toluene	108-88-3	NS	---
Ethyl Benzene	100-41-4	NS	---
Total Xylenes	1330-20-7	NS	---
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	18	90%
1,2,4-Trimethylbenzene	526-73-8	17	85%
1,2,3-Trimethylbenzene	108-67-8	19	94%
1,2,3,4-Tetramethylbenzene	488-23-3	21	107%
Methyl-t-butyl ether (MTBE)	156-60-5	NS	---
Chlorobenzene	108-90-7	NS	---
Styrene	100-42-5	NS	---

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	REC %
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	NS	---
1,2-Dichlorobenzene	95-50-1	NS	---
1,4-Dichlorobenzene	106-46-7	NS	---

Surrogate Recoveries:

1,2 Dichloroethane-d4	106%
Toluene-d8	102%
Bromofluorobenzene	99%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

NS = Not spiked.
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 4/17/95	Client Project Number	: 722450.2602
Date Received	: 4/18/95	Lab Project Number	: 95-1240
Date Prepared	: 04/30-5/01/95	Matrix	: Water
Date Analyzed	: 4/30-5/01/95	Method Number	: EPA 5030/8015 Modified

<u>Evergreen Sample #</u>	<u>Client Sample #</u>	<u>Surrogate Recovery</u>	<u>TVH mg/L</u>	<u>RL mg/L</u>
MB050195	METHOD BLANK	103%	U	0.1
MB050195B	METHOD BLANK	100%	U	0.1
X05829	MW-6	100%	U	0.1
X05830	MW-7	101%	U	0.1
X05830 DUP	MW-7	100%	U	0.1
X05831	MW-10	101%	U	0.1
X05832	MW-11	82%	18	0.5
X05834	CPT-16	103%	14	0.5


QUALIFIERS

U = TVH analyzed for but not detected.

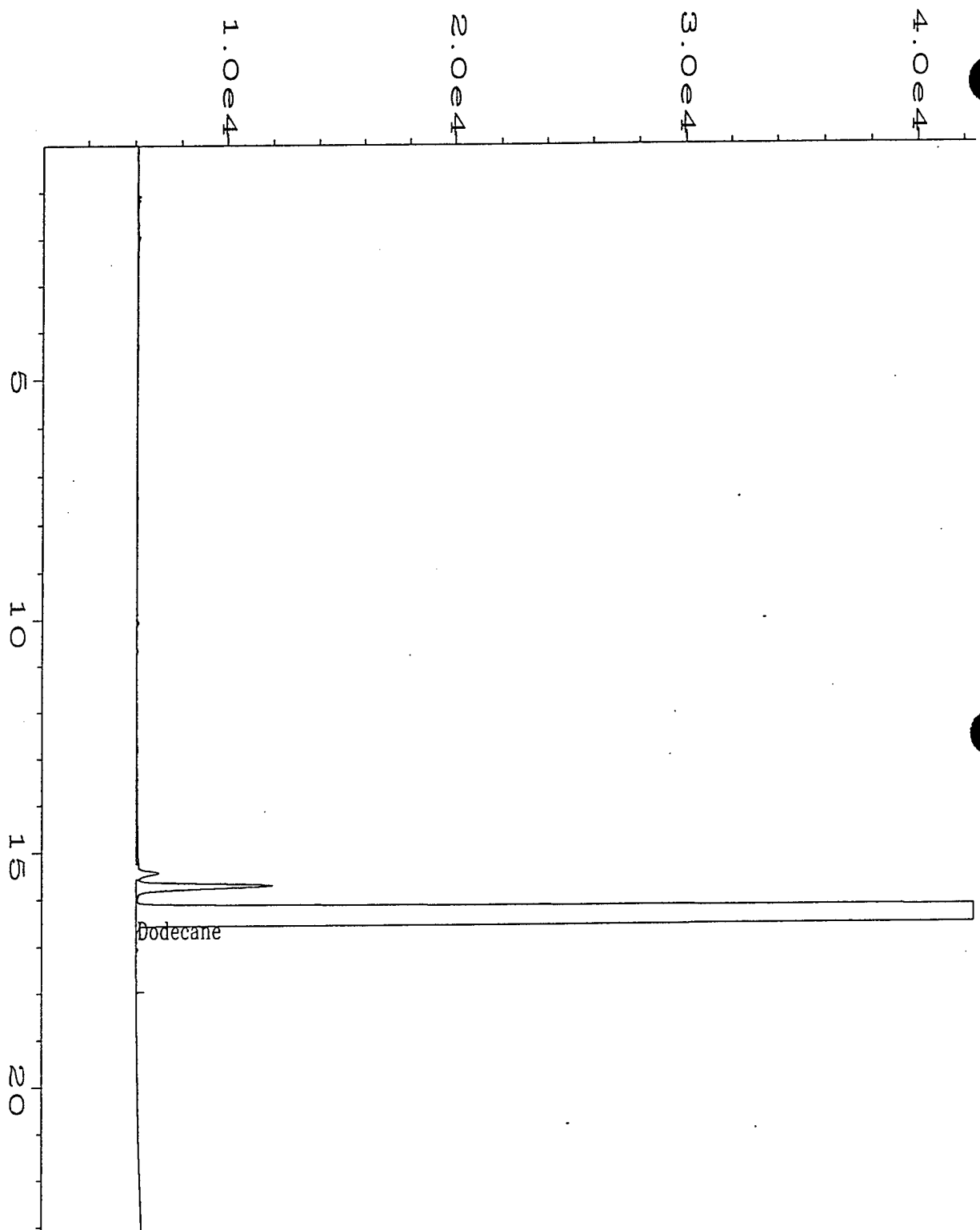
B = TVH found in blank also.

E = Extrapolated value.

RL = Reporting Limit.

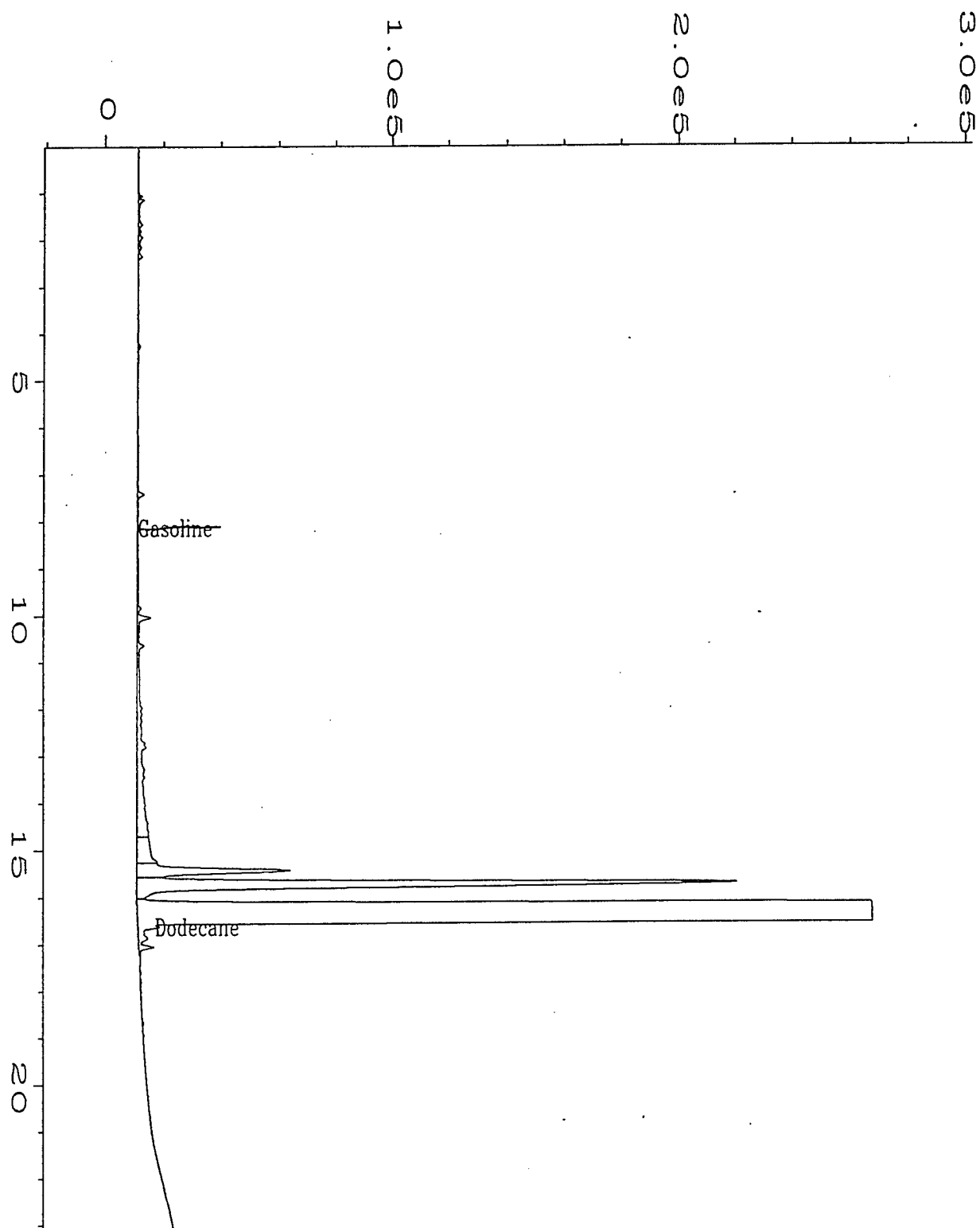

Analyst


Approved



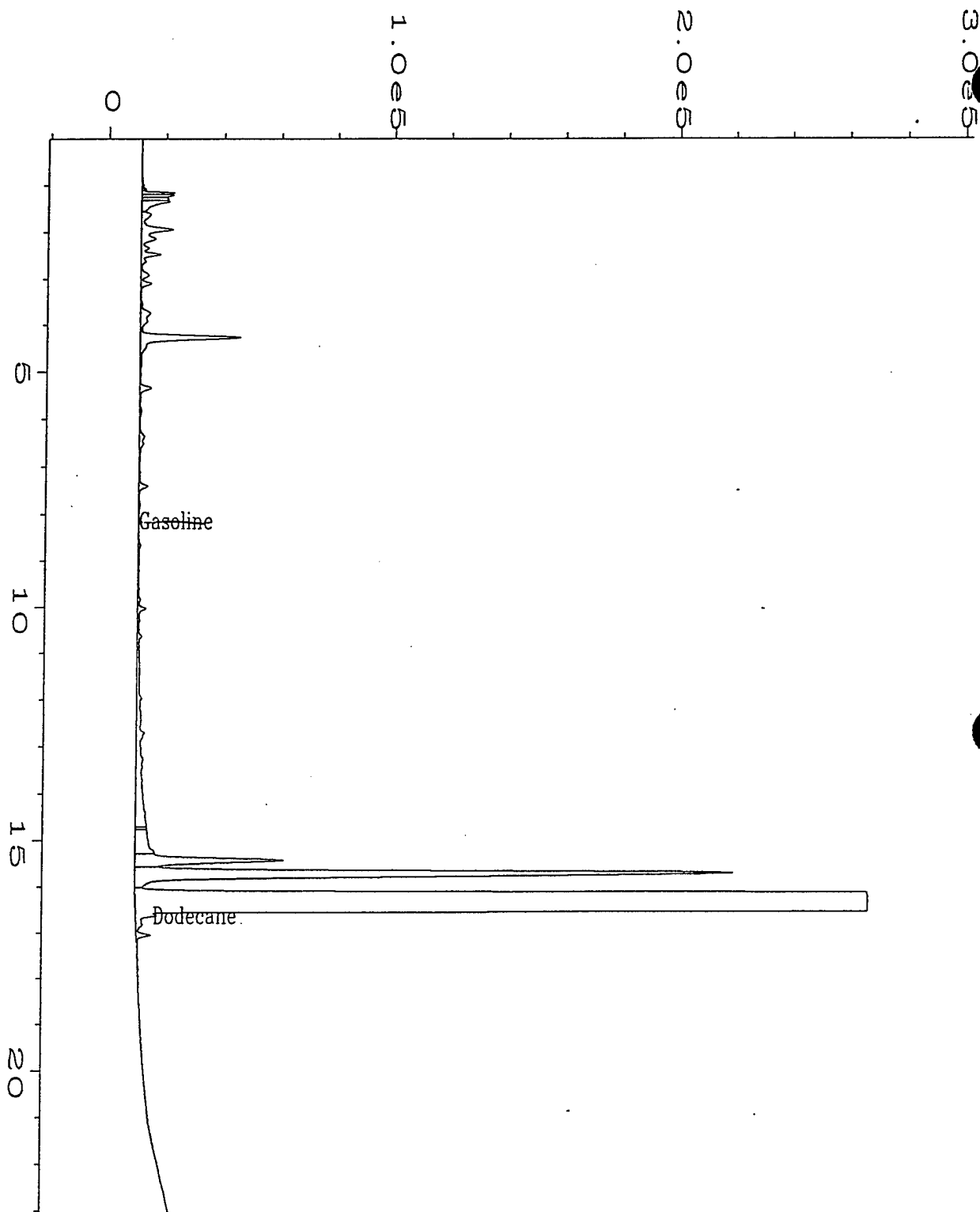
user modified

Data File Name	: D:\HPCHEM\1\DATA\TVH0430\009F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 9
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB050195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BA.M
quired on	: 30 Apr 95 11:58 PM	Analysis Method	: TVH0430.MT
Report Created on:	: 03 May 95 05:37 PM	Sample Amount	: 0
Last Recalib on	: 01 MAY 95 08:09 AM	ISTD Amount	:
Multiplier	: 1		



Data File Name	: C:\HPCHEM\1\DATA\tvh0501\008F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 8
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB050195B	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 01 May 95 07:19 PM	Analysis Method	: TVH0501.MTH
Report Created on	: 02 May 95 10:19 AM	Sample Amount	: 0
Last Recalib on	: 01 MAY 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

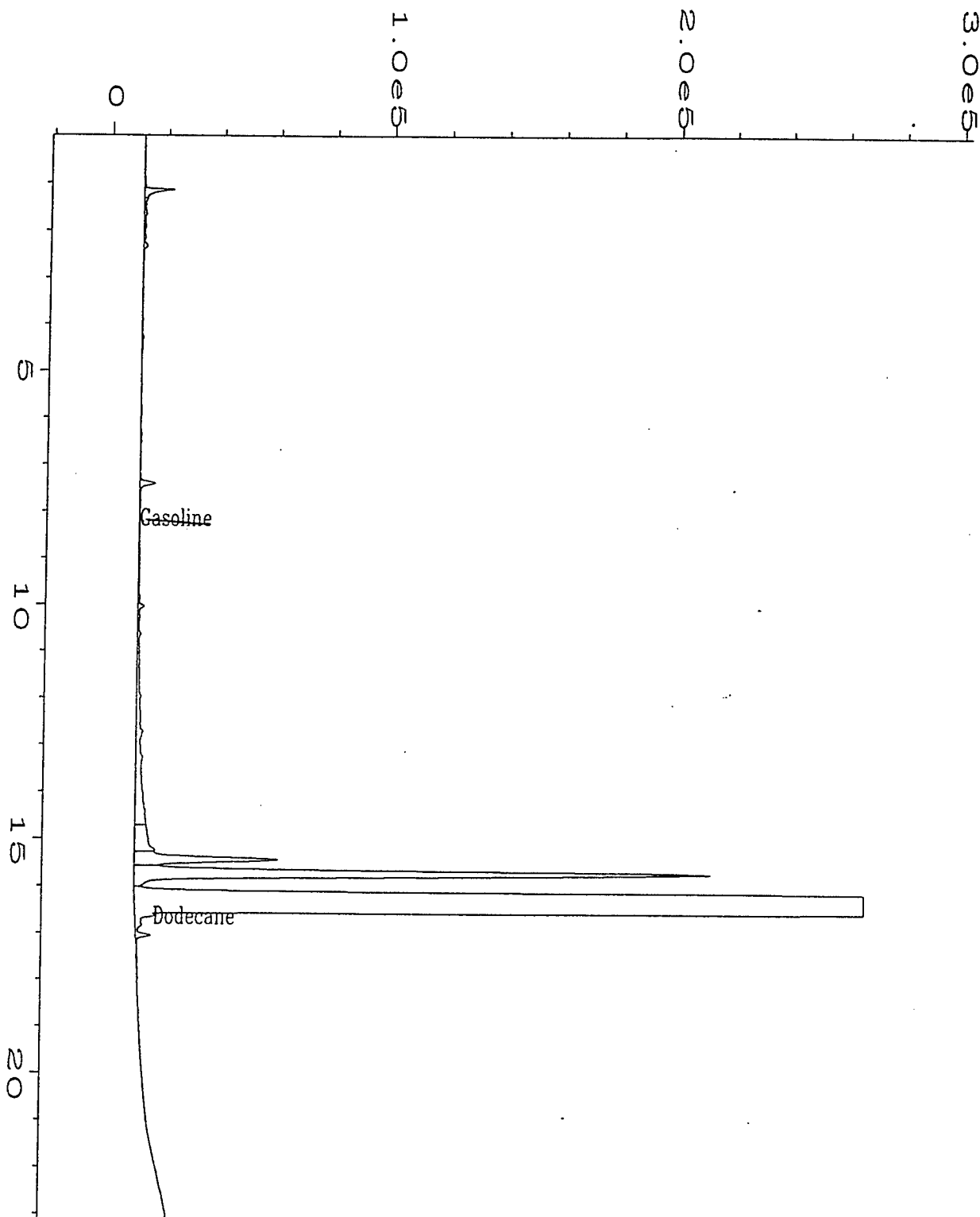
pm 5/10/95



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\009F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 9
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05829;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BA.M
Acquired on	: 01 May 95 07:54 PM	Analysis Method	: TVH0501.M
Report Created on:	01 May 95 08:18 PM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

5/10/95

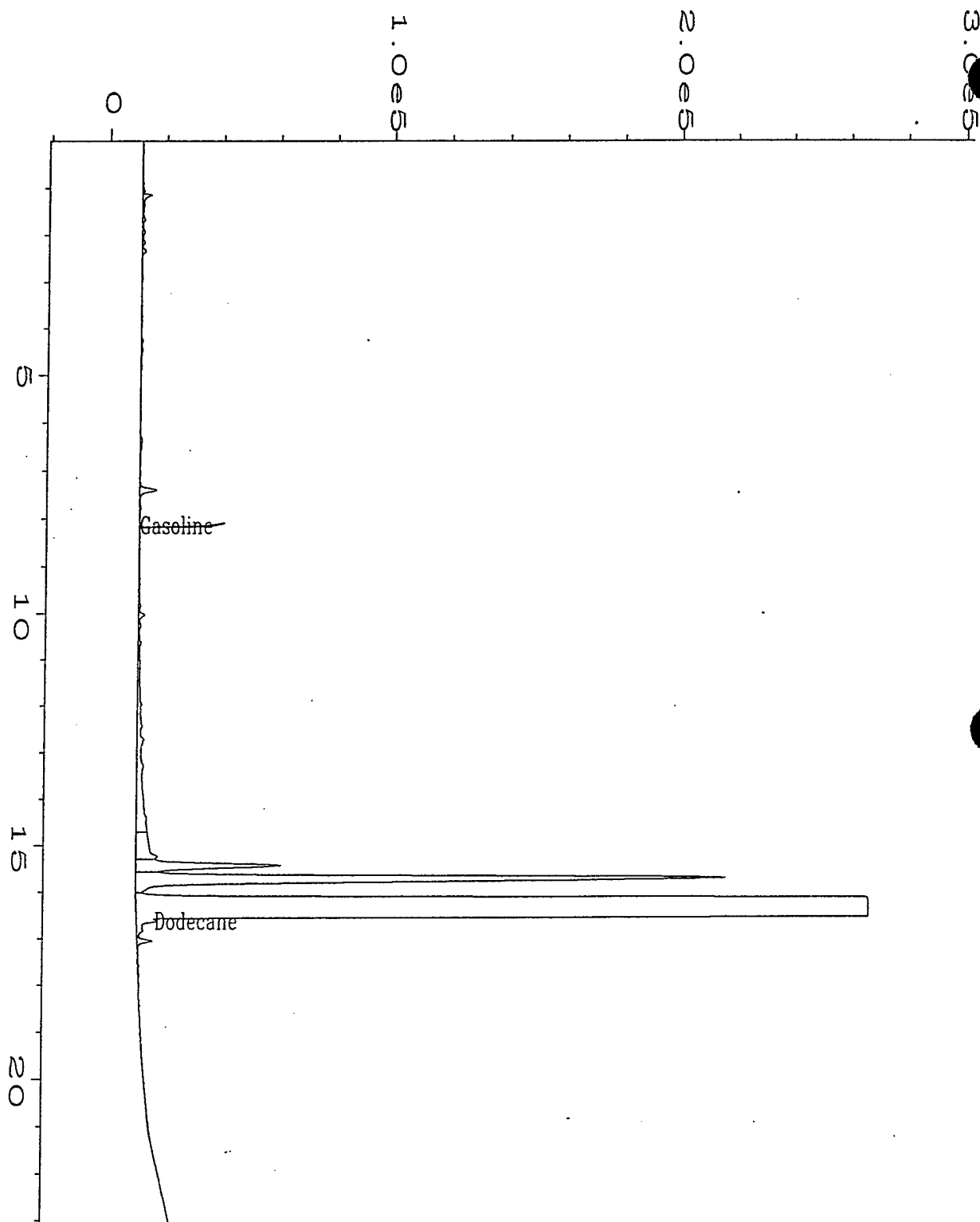
MW-6



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\010F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 10
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05830;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 01 May 95 08:29 PM	Analysis Method	: TVH0501.MTH
Report Created on	: 01 May 95 08:54 PM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

Done 5/10/95

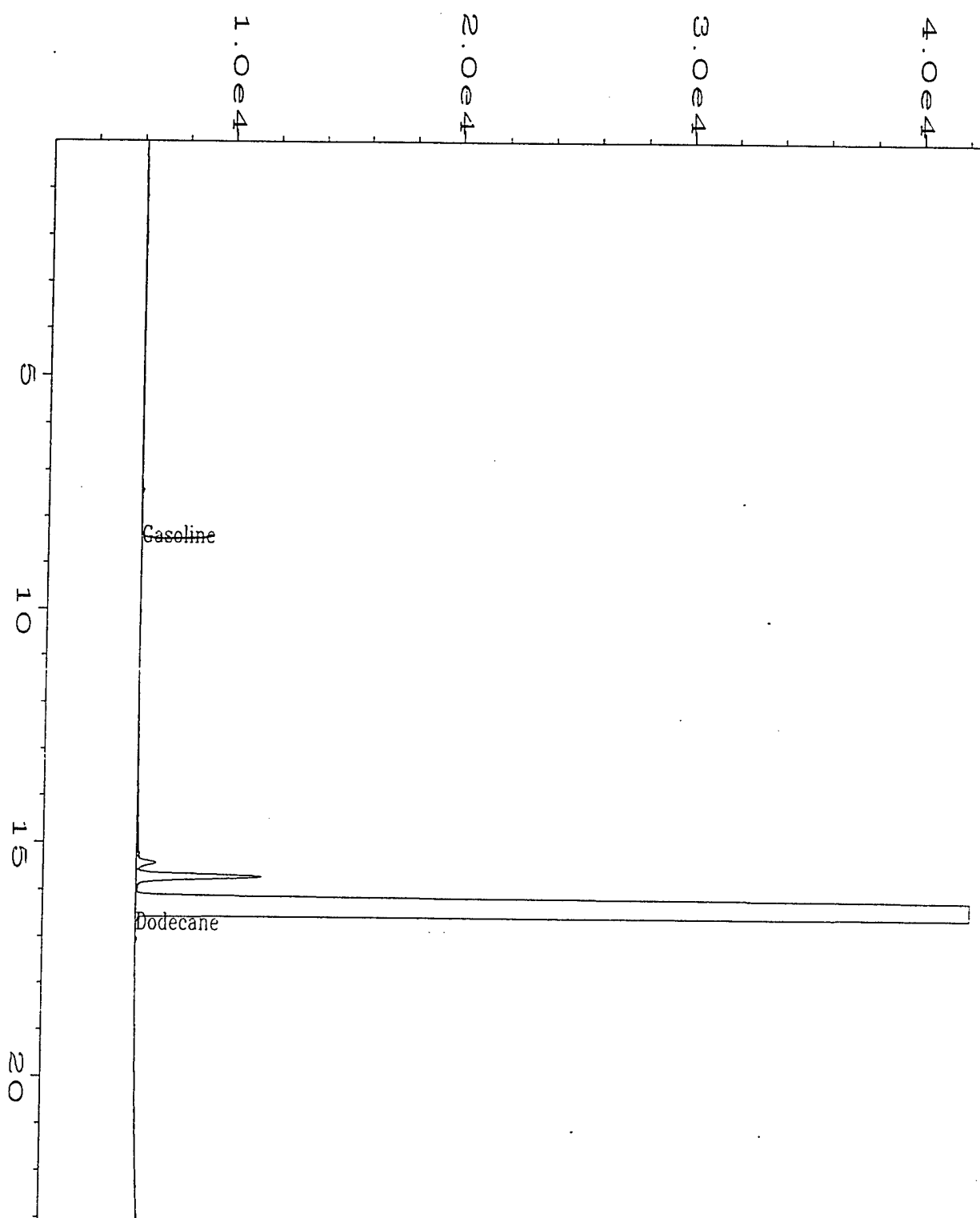
MW-7



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\011F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 11
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05830Dupl;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BA.M
quired on	: 01 May 95 09:04 PM	Analysis Method	: TVH0501.MT
Report Created on:	: 01 May 95 09:30 PM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

pm 5/10/95

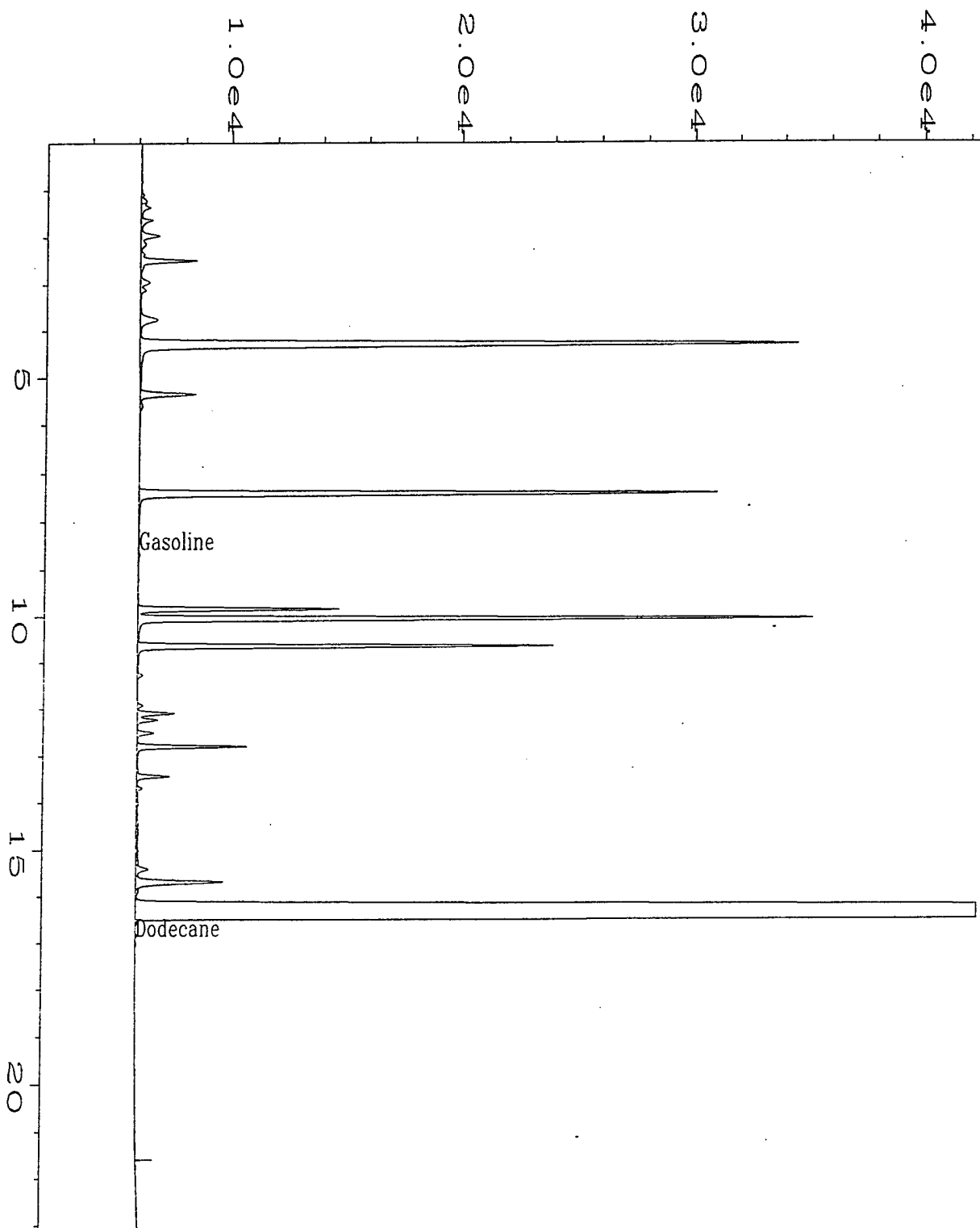
MW-7 dup



Data File Name	: D:\HPCHEM\1\DATA\TVH0430\015F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 15
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05831;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MTH
Acquired on	: 01 May 95 03:28 AM	Analysis Method	: TVH0430.MTH
Report Created on:	03 May 95 05:41 PM	Sample Amount	: 0
Last Recalib on	: 01 MAY 95 08:09 AM	ISTD Amount	:
Multiplier	: 1		

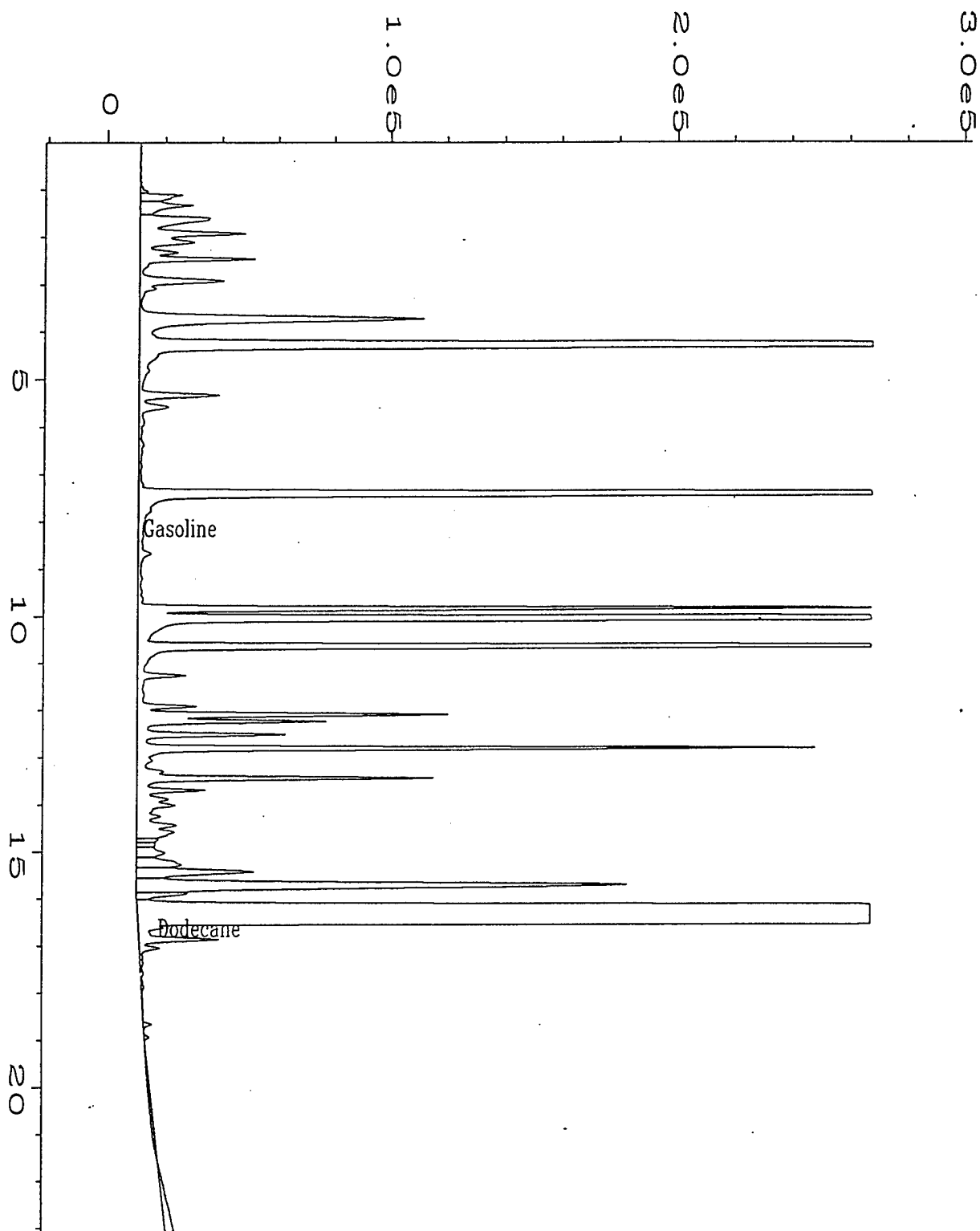
pm 5/10/95

MW-810



Data File Name	: D:\HPCHEM\1\DATA\TVH0430\016F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 16
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05832;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BAS.MT
Acquired on	: 01 May 95 04:03 AM	Analysis Method	: TVH0430.MT
Report Created on:	03 May 95 05:42 PM	Sample Amount	: 0
Last Recalib on	: 01 MAY 95 08:09 AM	ISTD Amount	:
Multiplier	: 1		

mw-11



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\012F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 12
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05834;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MTH
Printed on	: 01 May 95 09:38 PM	Analysis Method	: TVH0501.MTH
Report Created on:	01 May 95 10:03 PM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

CPT-16

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-6	Client Project No.	: 722450.2602
Lab Sample No.	: X05829	Lab Project No.	: 95-1240
Date Sampled	: 4/17/95	EPA Method No.	: 5030/8015 Modified
Date Received	: 4/18/95	Matrix	: SOIL
Date Prepared	: 5/1/95	Method Blank	: MB050195
Date Analyzed	: 5/1/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	0.00	1.76	88%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	2.00	1.59	80%	10	50	60-140

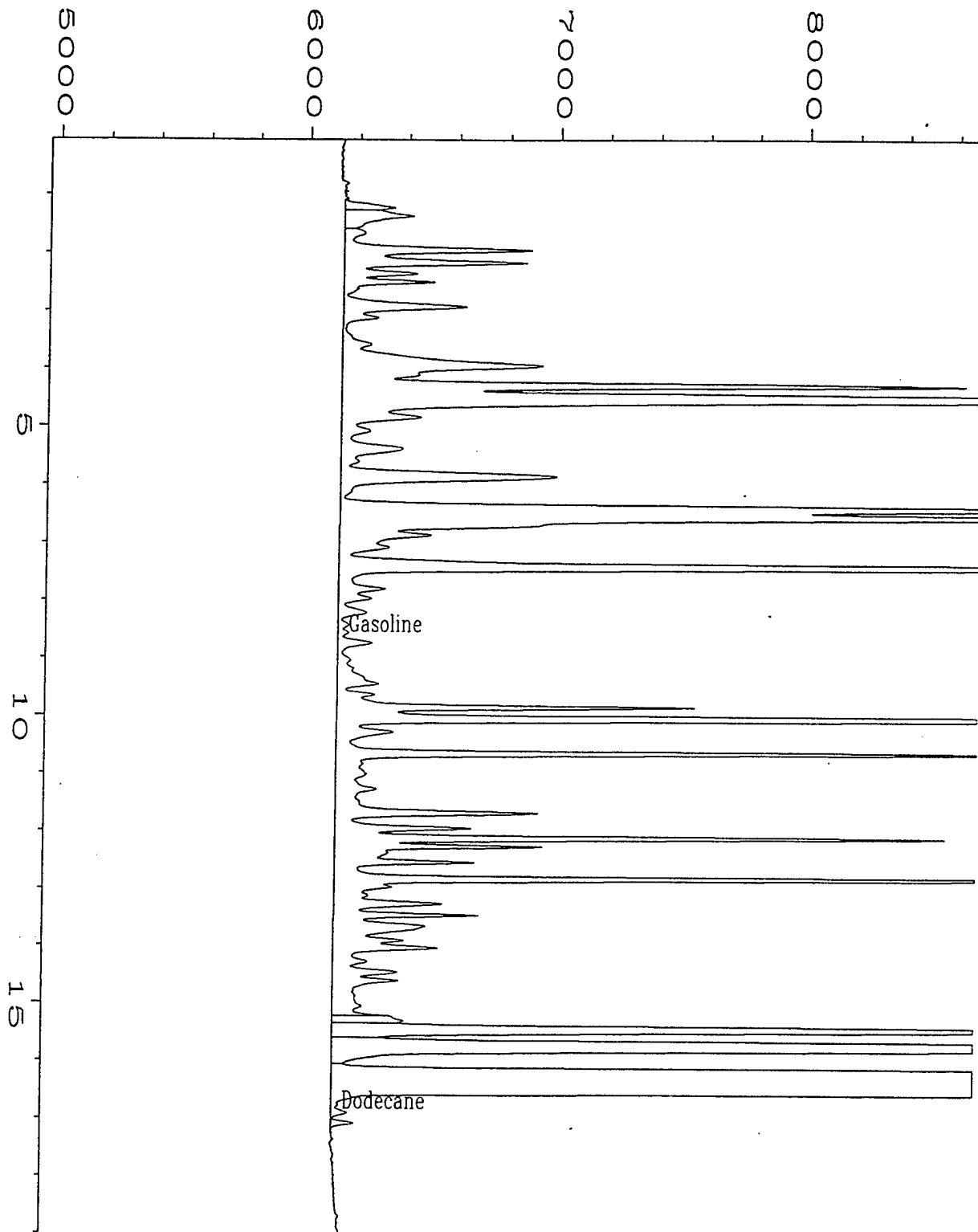
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.
Spike Recovery: 0 out of (2) outside limits.

NA = Not analyzed/not applicable.

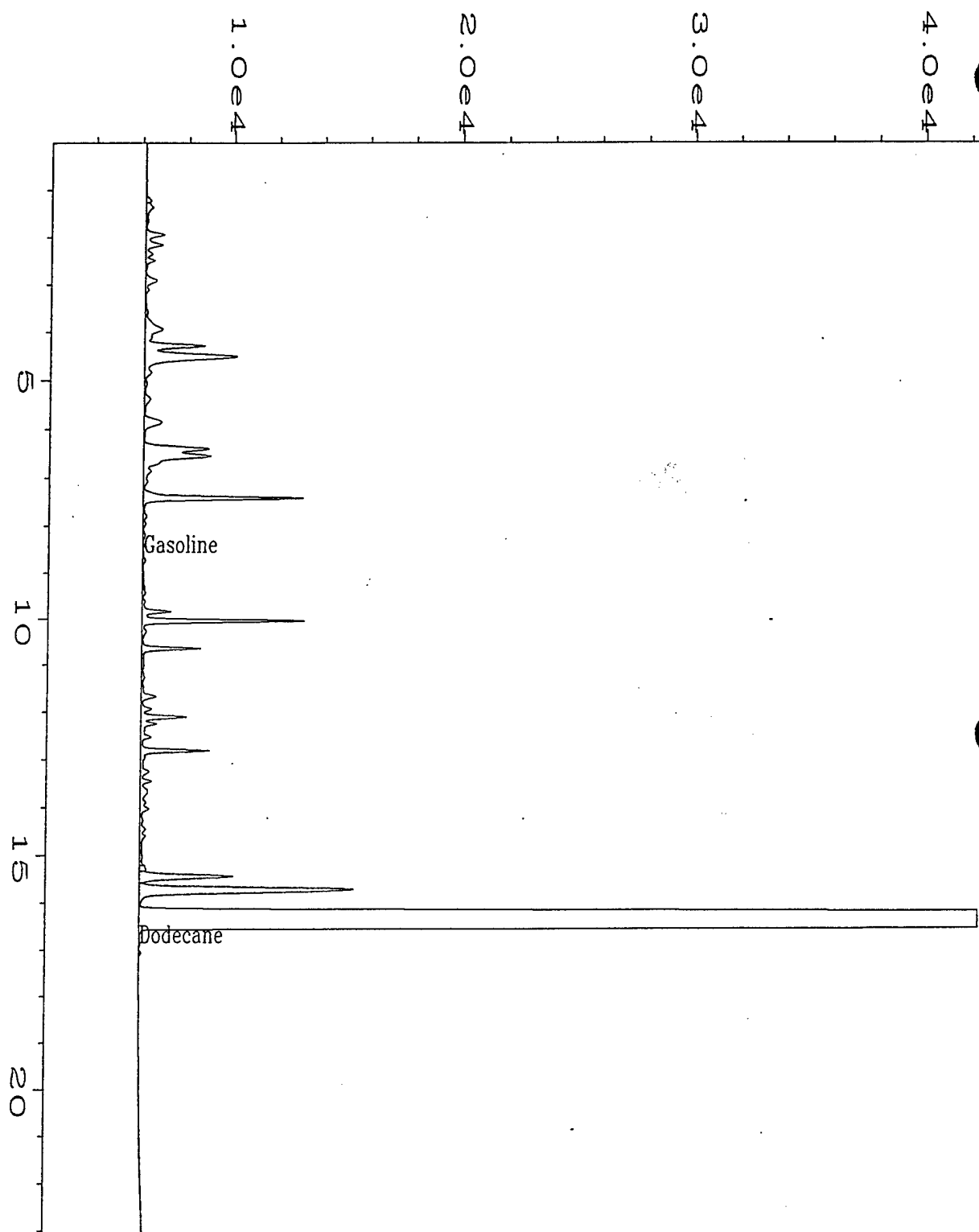
Comments:

K. Cone



Data File Name	: D:\HPCHEM\1\DATA\TVH0430\011F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 11
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05829MS	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Printed on	: 01 May 95 01:08 AM	Analysis Method	: TVH0430.MTH
Report Created on	: 03 May 95 05:27 PM	Sample Amount	: 0
Last Recalib on	: 01 MAY 95 08:09 AM	ISTD Amount	:
Multiplier	: 1		

MW-6 MS



Data File Name	: D:\HPCHEM\1\DATA\TVH0430\012F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 12
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05829MSD	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BA.M
Acquired on	: 01 May 95 01:43 AM	Analysis Method	: TVH0430.MT
Report Created on:	03 May 95 05:28 PM	Sample Amount	: 0
Last Recalib on	: 01 MAY 95 08:09 AM	ISTD Amount	:
Multiplier	: 1		

MW-6 MSD

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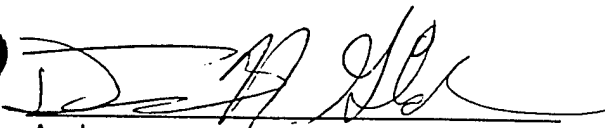
TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

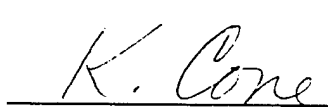
LCS Number : LCS050195B Matrix : WATER
Date Prepared : 5/1/95 Method Numbers : EPA 5030/8015 Modified
Date Analyzed : 5/1/95
Sequence Number : TVH0501007

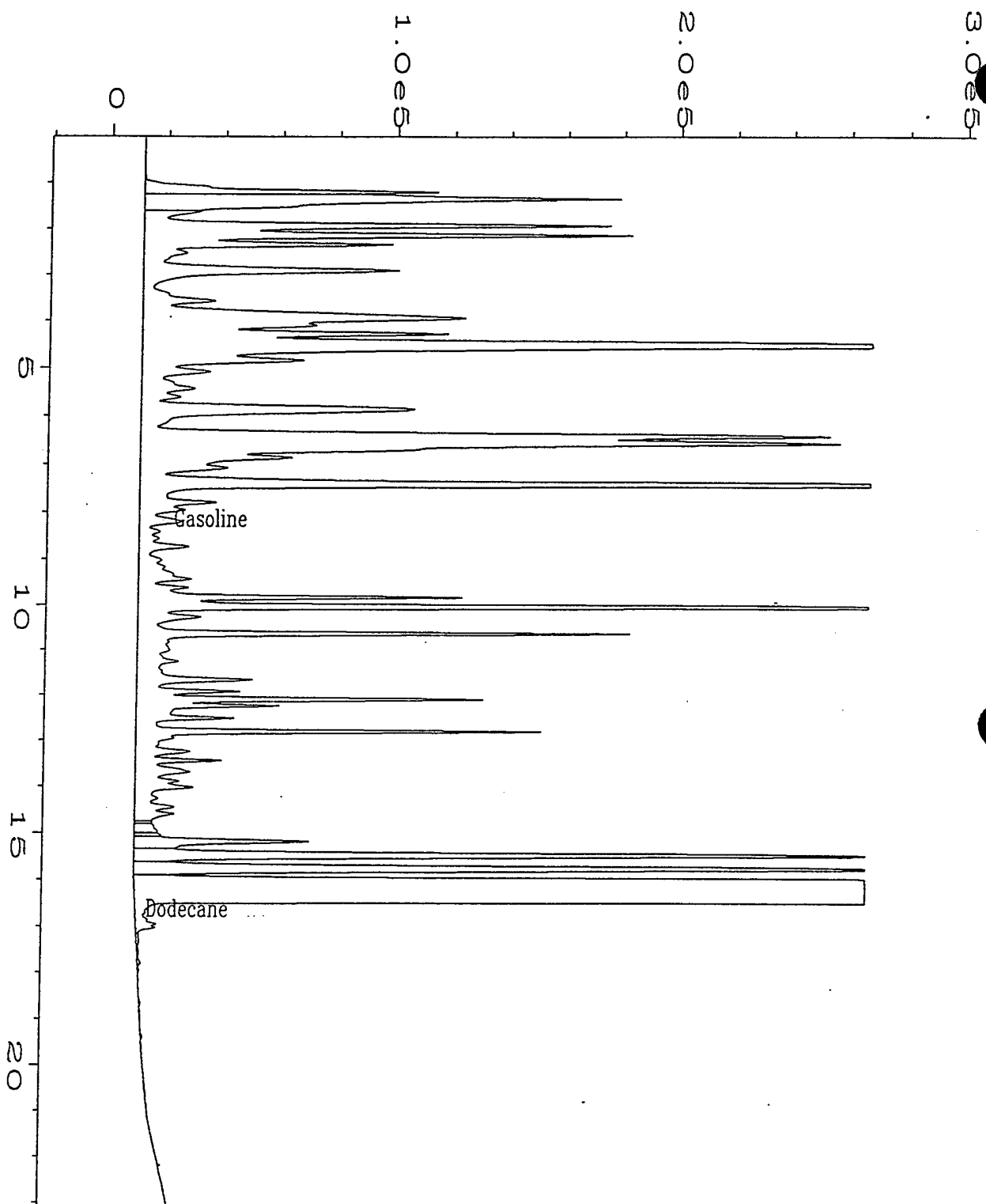
<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	5.00	5.11	102%	70%-130%

QUALIFIERS

U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\007F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 7
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS050195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BAS
Acquired on	: 01 May 95 06:44 PM	Analysis Method	: TVH0501.MTH
Report Created on:	01 May 95 07:08 PM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

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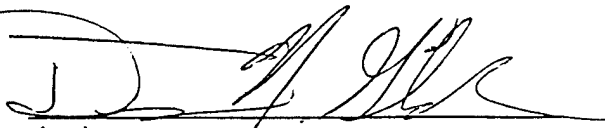
TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

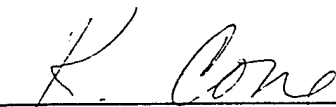
LCS Number : LCS050195 Matrix : WATER
Date Prepared : 4/30/95 Method Numbers : EPA 5030/8015 Modified
Date Analyzed : 4/30/95
Sequence Number : TVH0430008

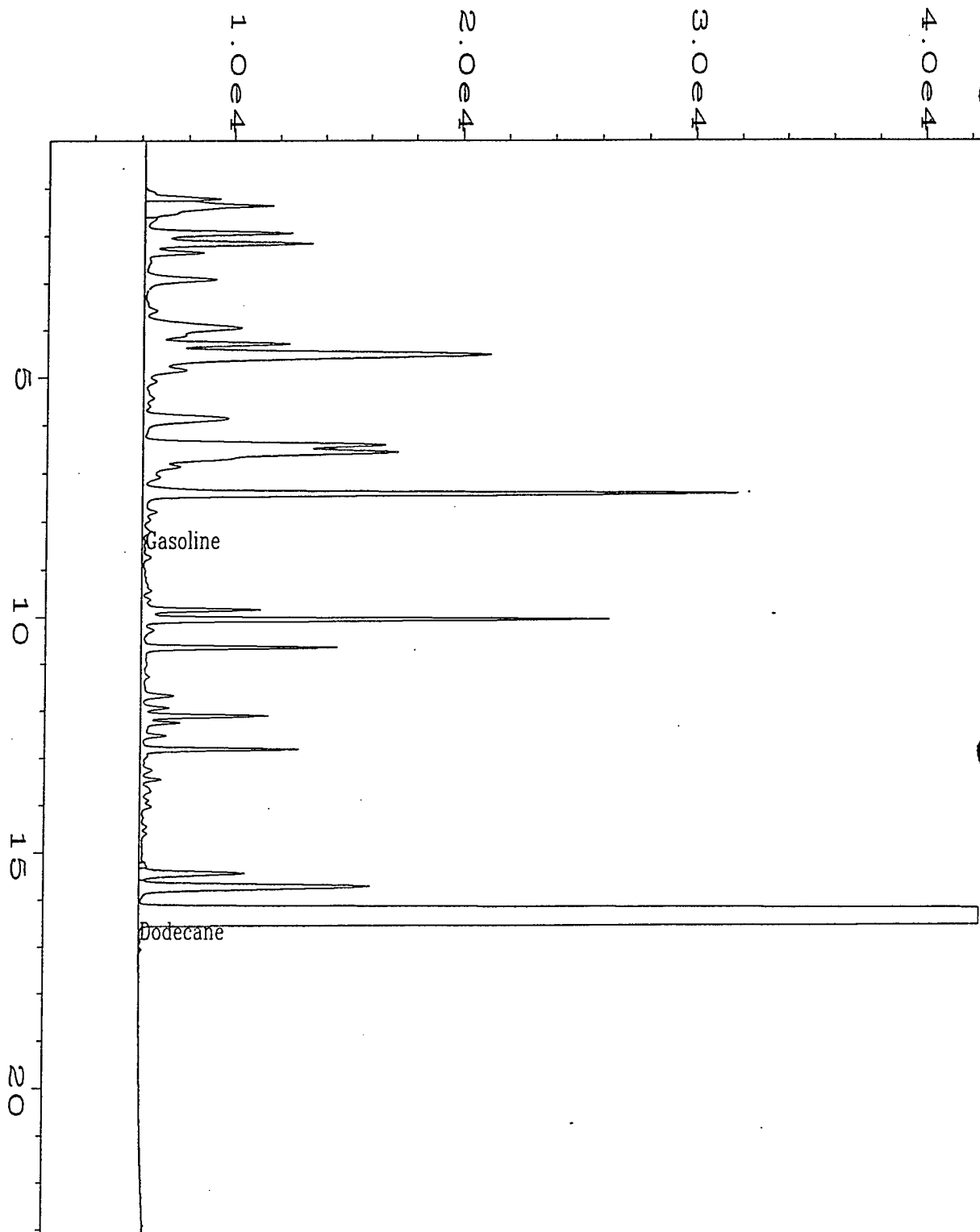
<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	5.00	6.34	127%	70%-130%

QUALIFIERS

U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: D:\HPCHEM\1\DATA\TVH0430\008F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 8
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS050195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BA M
quired on	: 30 Apr 95 11:23 PM	Analysis Method	: TVH043 MT
ort Created on:	03 May 95 05:29 PM	Sample Amount	: 0
Last Recalib on	: 01 MAY 95 08:09 AM	ISTD Amount	:
Multiplier	: 1		

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(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS
JET FUEL

Date Sampled	: 4/17/95	Client Project Number	: 722450.2602
Date Received	: 4/18/95	Lab Project Number	: 95-1240
Date Prepared	: 4/18/95	Matrix	: Water
Date Analyzed	: 4/20,21/95	Method Number	: 3500/Mod.8015

<u>Evergreen Sample #</u>	<u>Client Sample #</u>	<u>Surrogate Recovery</u>	<u>TEH mg/L</u>	<u>RL mg/L</u>
MB041895	METHOD BLANK	84%	U	0.5
X05829	MW-6	93%	U	0.5
X05830	MW-7	89%	0.6	0.5
X05831	MW-10	91%	U	0.5
X05832	MW-11	95%	5.2	0.5
X05834	CPT-16	102%	14	0.5

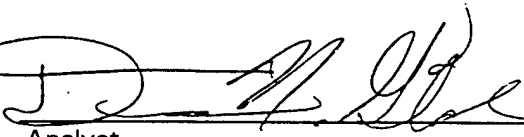
QUALIFIERS

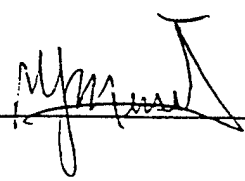
U = TEH analyzed for but not detected.

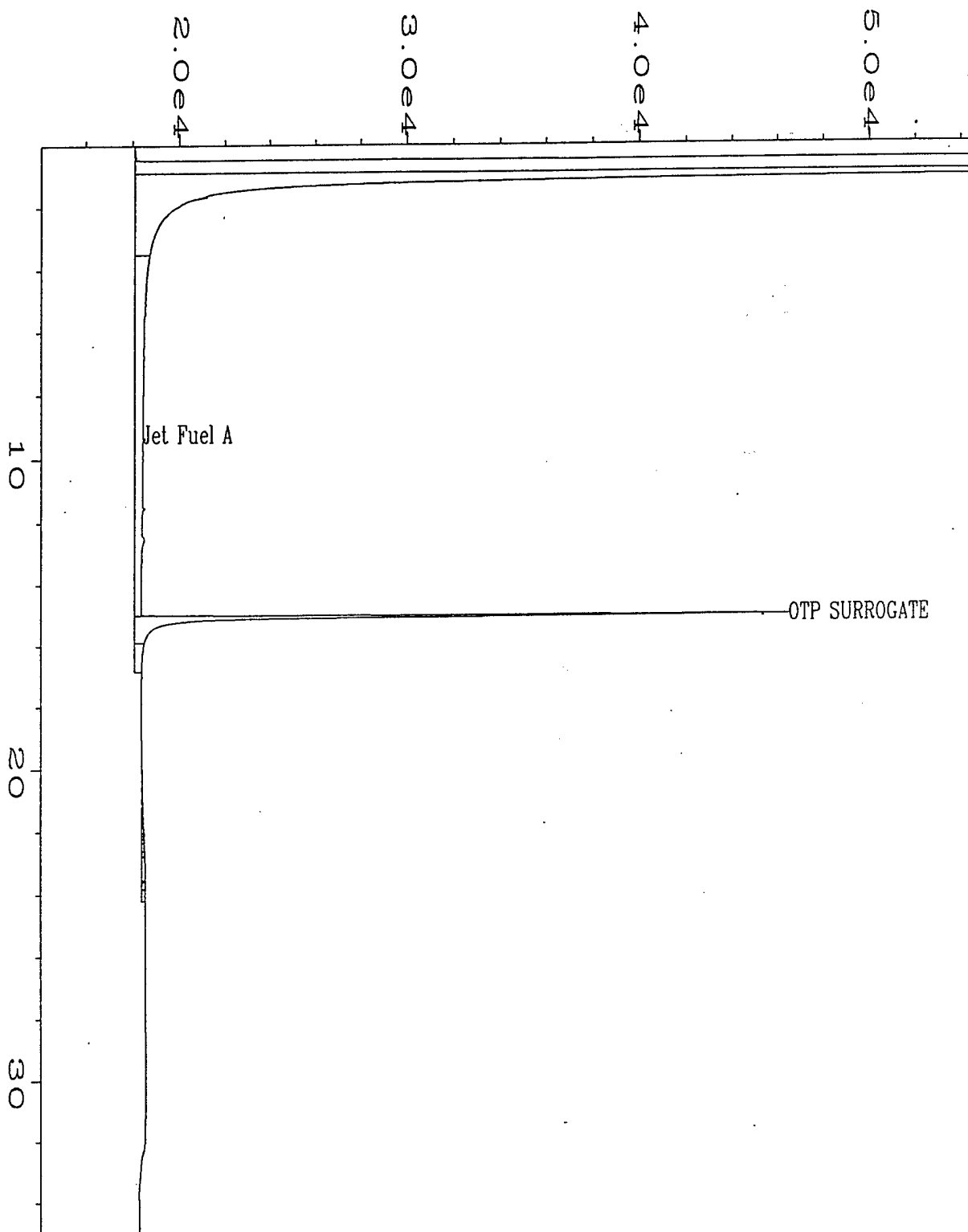
B = TEH found in blank.

E = Extrapolated value.

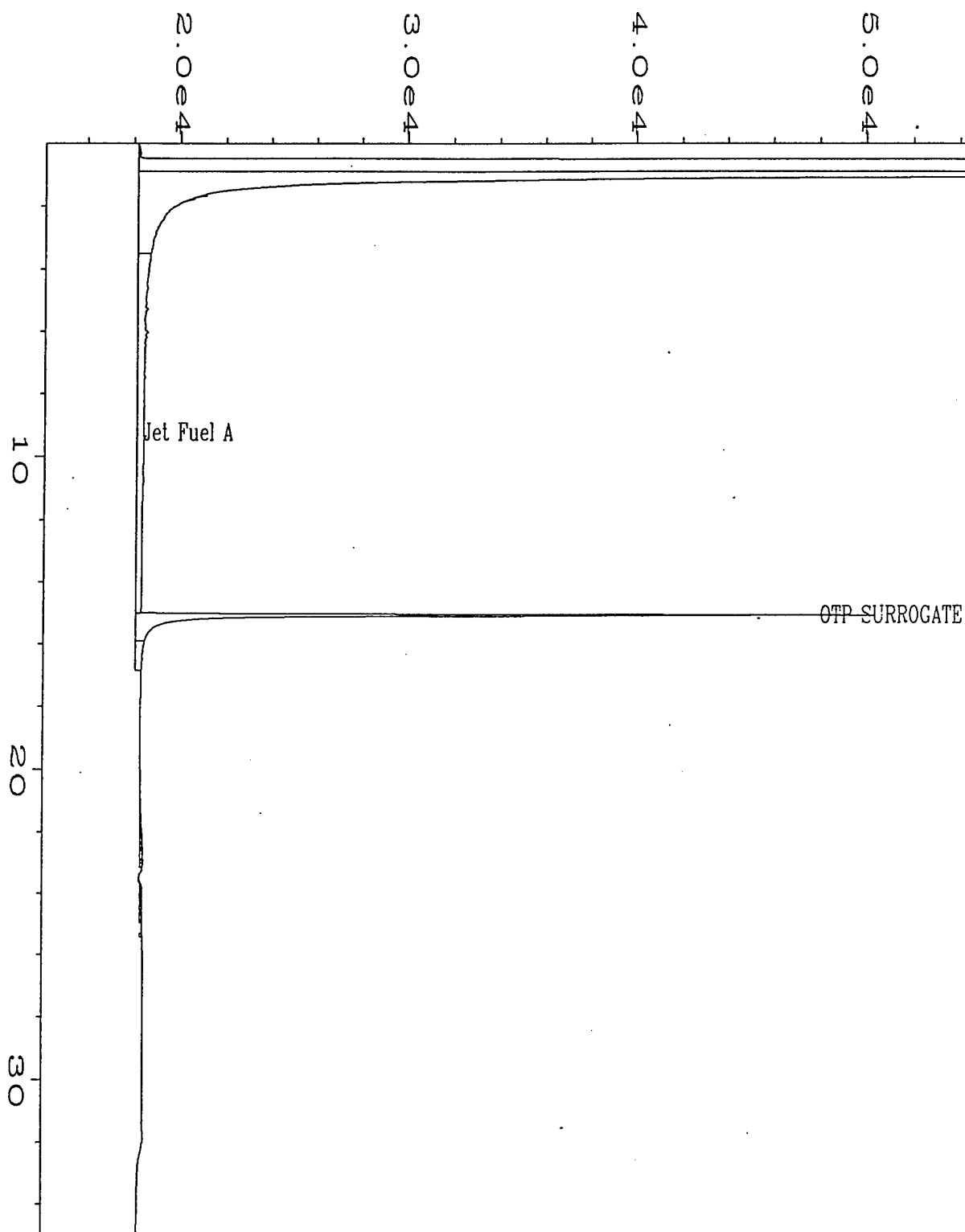
RL = Reporting Limit


Analyst

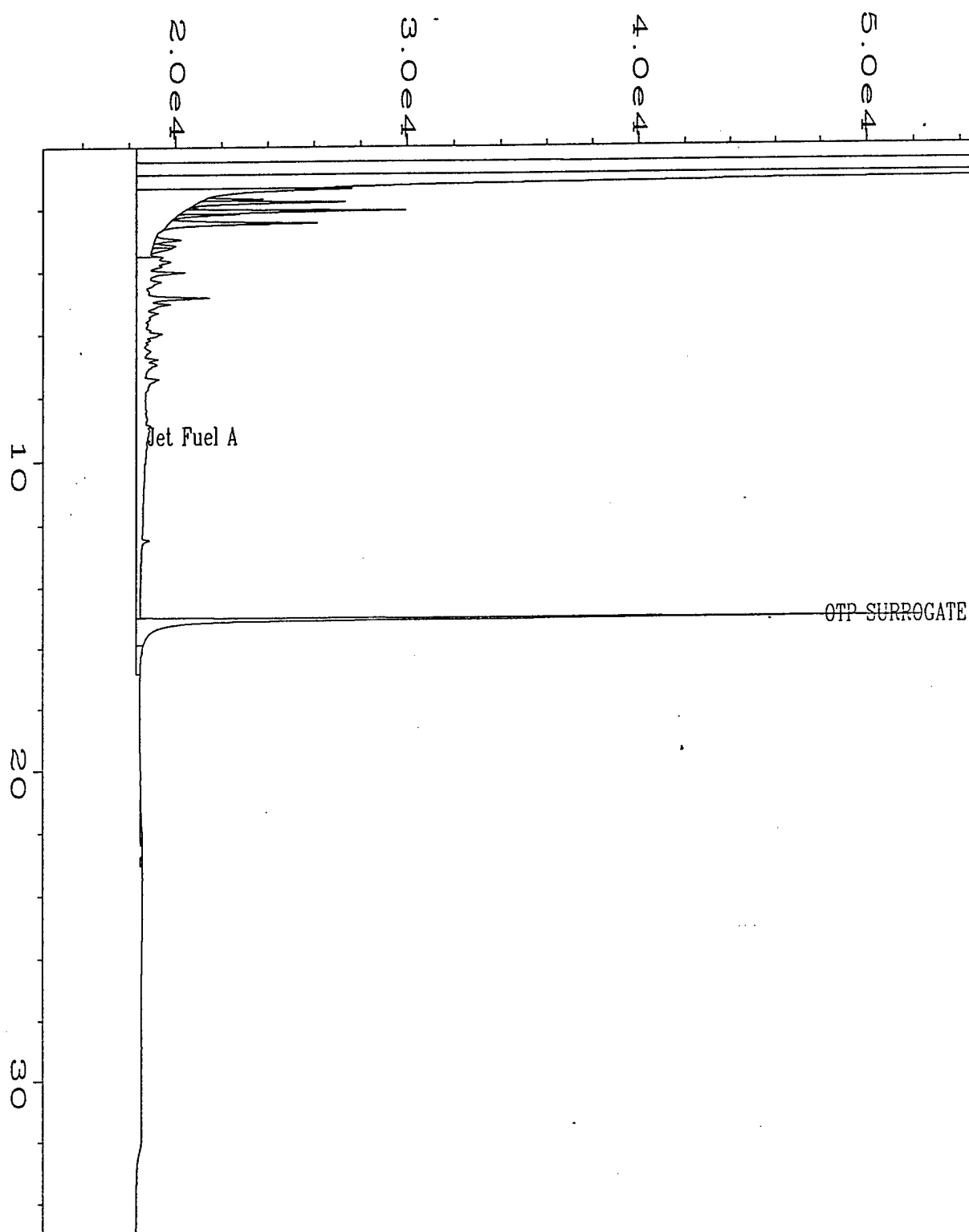

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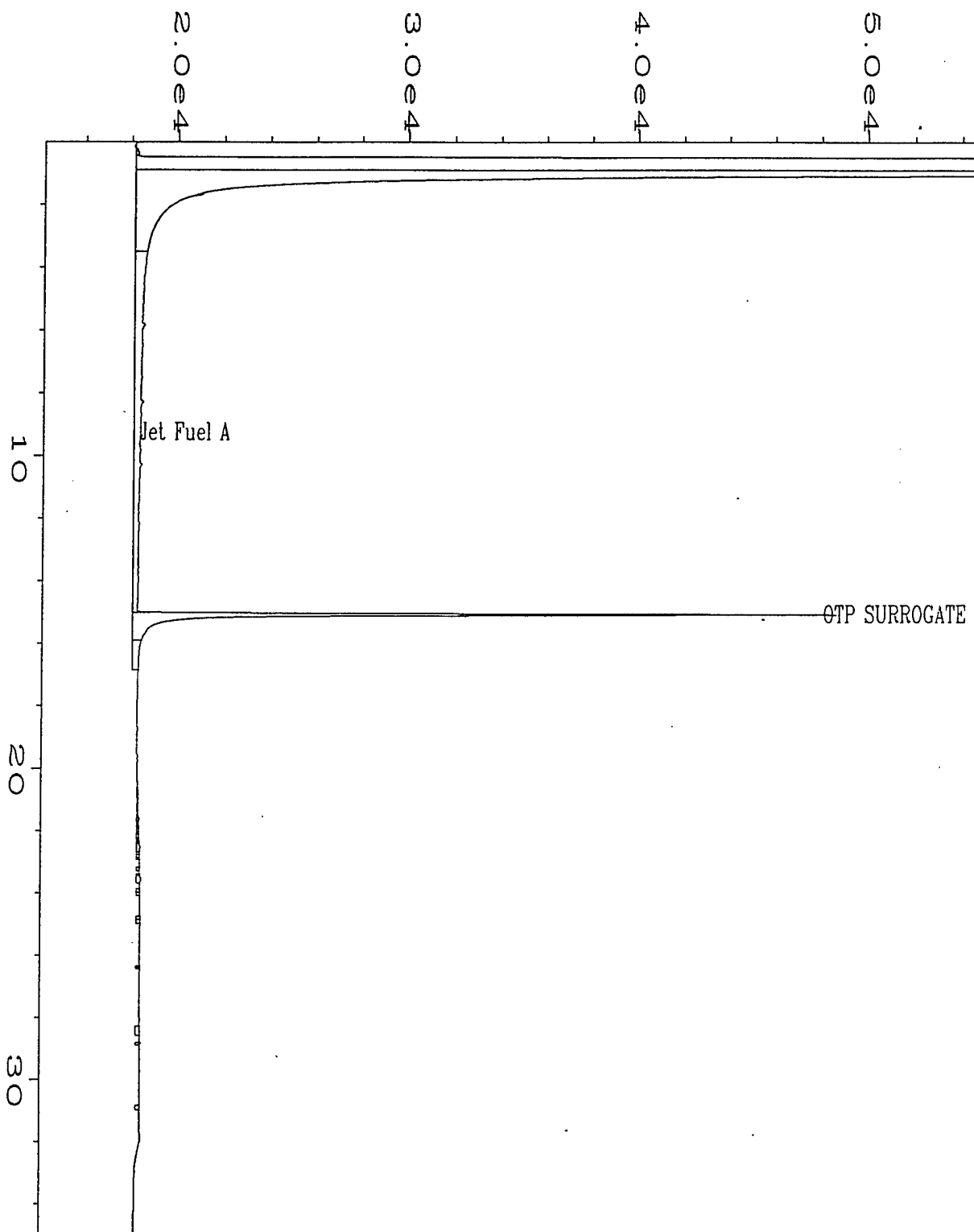
Data File Name	: C:\HPCHEM\2\DATA\JET0420\009R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 9
Instrument	: TEH	Injection Number	: 1
Sample Name	: WB041895	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BA
quired on	: 20 Apr 95 08:28 PM	Analysis Method	: JET0420.M
Report Created on:	: 21 Apr 95 09:32 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		



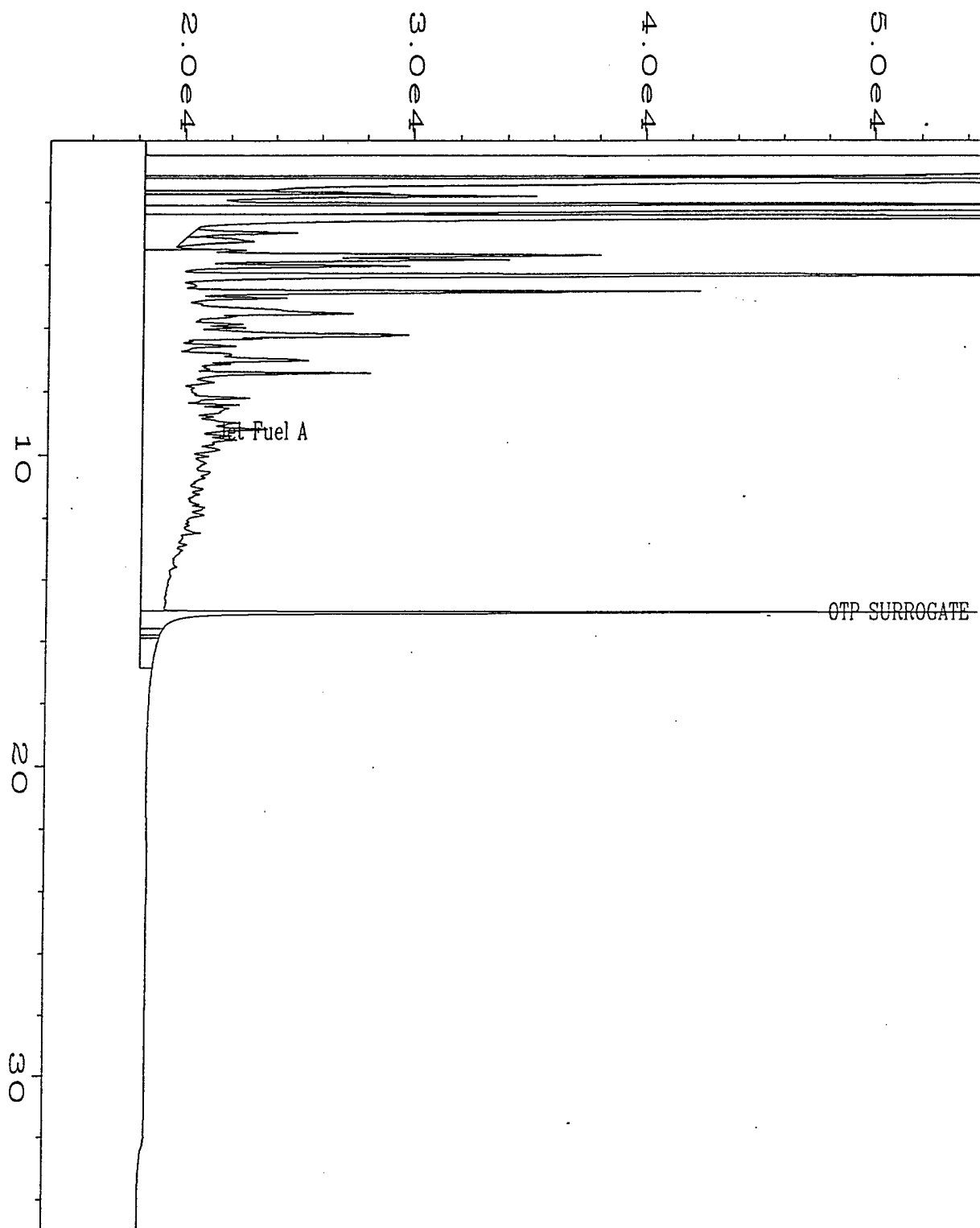
Data File Name	: C:\HPCHEM\2\DATA\JET0420\011R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 11
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05829 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Required on	: 20 Apr 95 10:00 PM	Analysis Method	: JET0420.MTH
Report Created on:	: 21 Apr 95 09:32 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1240 CLIENT # MW-6 WATER		



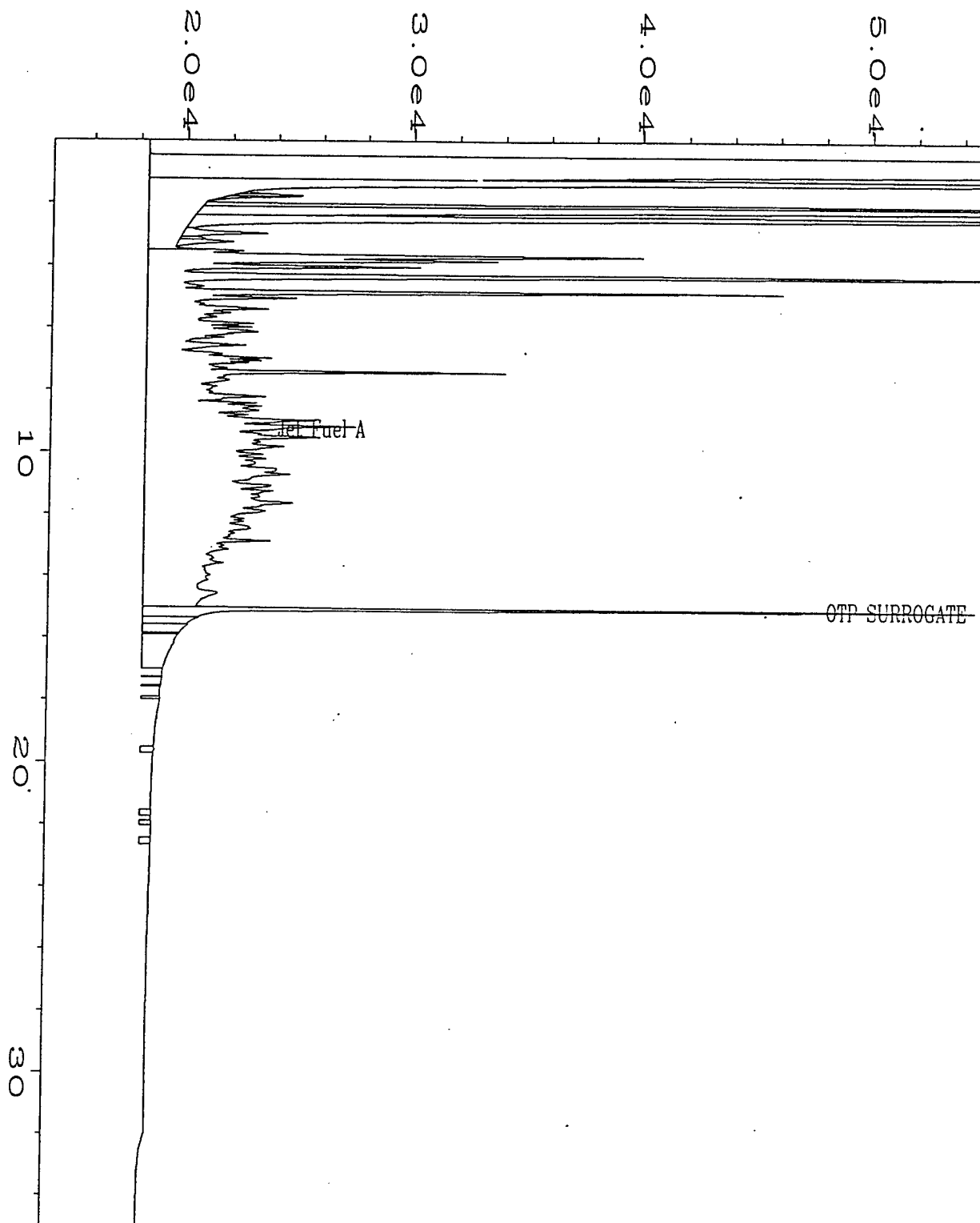
Data File Name	: C:\HPCHEM\2\DATA\JET0420\012R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 12
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05830 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1BA M
quired on	: 20 Apr 95 10:47 PM	Analysis Method	: JET0420.MT
Report Created on:	21 Apr 95 09:33 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1240 CLIENT # MW-7 WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0420\013R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 13
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05831 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Required on	: 20 Apr 95 11:33 PM	Analysis Method	: JET0420.MTH
Report Created on	: 21 Apr 95 09:33 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1240 CLIENT # MW-10 WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0420\014R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 14
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05832 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BA
Acquired on	: 21 Apr 95 00:19 AM	Analysis Method	: JET0420.M
Report Created on	: 21 Apr 95 09:33 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1240 CLIENT # MW-11 WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0420\015R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 15
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05834 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 21 Apr 95 01:06 AM	Analysis Method	: JET0420.MTH
Report Created on:	: 21 Apr 95 09:33 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1240 CLIENT # CPT-16 WATER		

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Laboratory Control Sample (LCS)

LCS Number : LCS041895 Matrix : WATER
Date Prepared : 4/18/95 Method Number : 5030/MOD.8015
Date Analyzed : 4/20/95
Sequence Number : JET10

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
JET FUEL	1000	820	82%	70%-130%

Surrogate Recovery: 79%

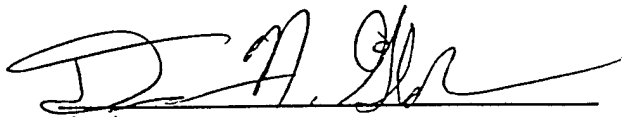
QUALIFIERS

U = TEH analyzed for but not detected.

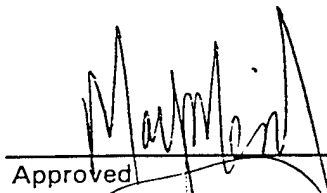
B = TEH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

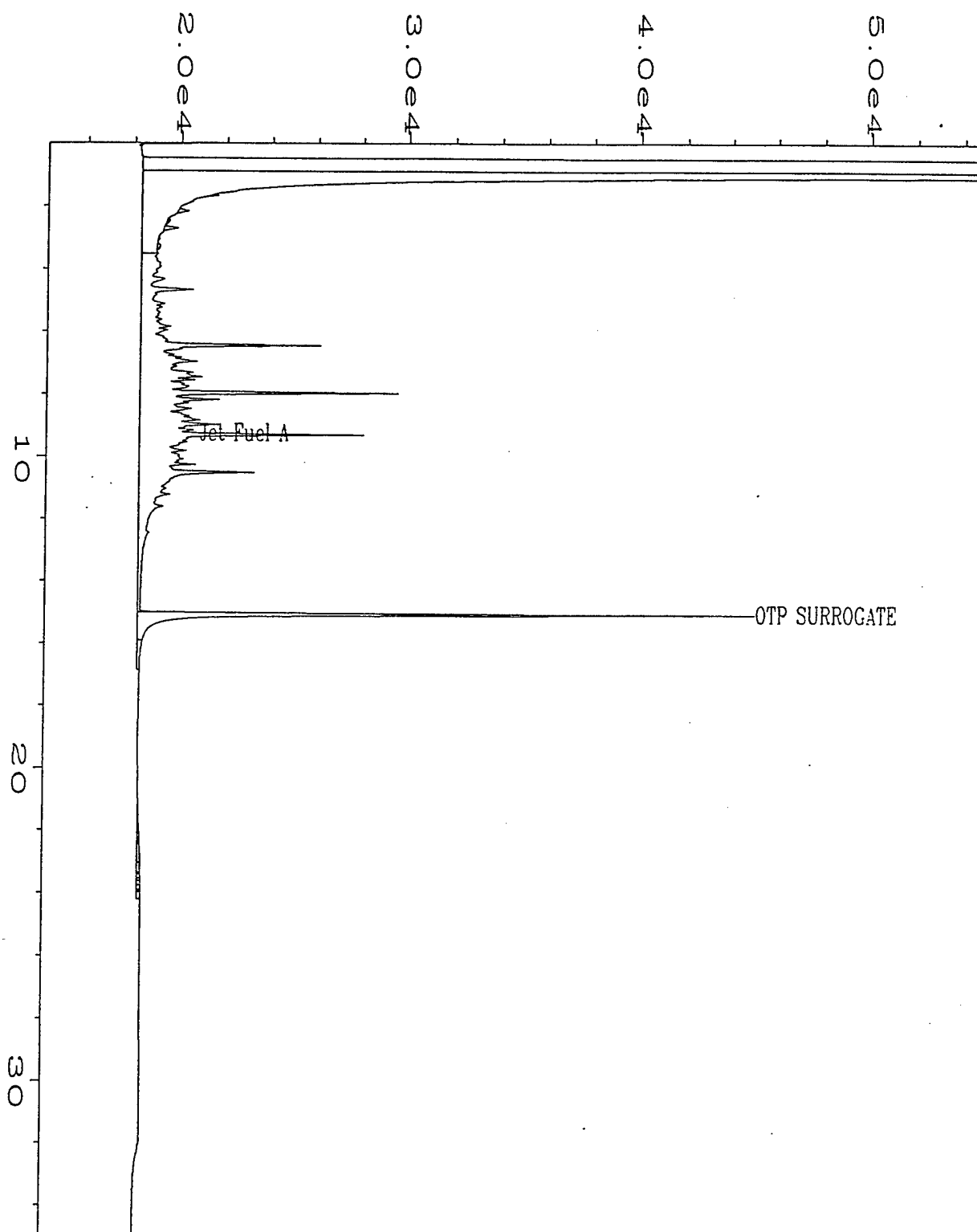
NA = Not Available.



Analyst



Approved



Data File Name	: C:\HPCHEM\2\DATA\JET0420\010R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 10
Instrument	: TEH	Injection Number	: 1
Sample Name	: LCS041895	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 20 Apr 95 09:14 PM	Analysis Method	: JET0420.MTH
Report Created on:	: 21 Apr 95 09:32 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

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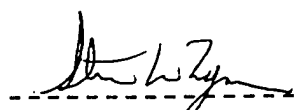
Methane Data Report

Date Sampled	: 04/17/95	Client Project No.:	722450.2602
Date Received	: 04/18/95	Lab Project No.	: 95-1240
Date Prepared	: 05/01/95	Dilution Factor	: 1.00
Date Analyzed	: 05/01/95	Method	: RSKSOP-175
		Matrix	: Water

Evergreen Sample #	Client Sample #	Matrix	Concentration mg/L	EDL* mg/L
-----	-----	-----	-----	-----
MB050195	Method Blank	Water	U	0.004
x05829	MW-6	Water	0.035	0.004
x05830	MW-7	Water	0.010	0.004
x05831	MW-10	Water	U	0.004
x05832	MW-11	Water	0.20	0.004
x05834	CPT-16	Water	0.037	0.004

QUALIFIERS:

U = Compound analyzed for, but not detected above the
Estimated Detection Limit.
B = Compound also found in the blank, blank data should be
compared.
* = Indicates the Estimated Detection Limit.
E = Extrapolated value.

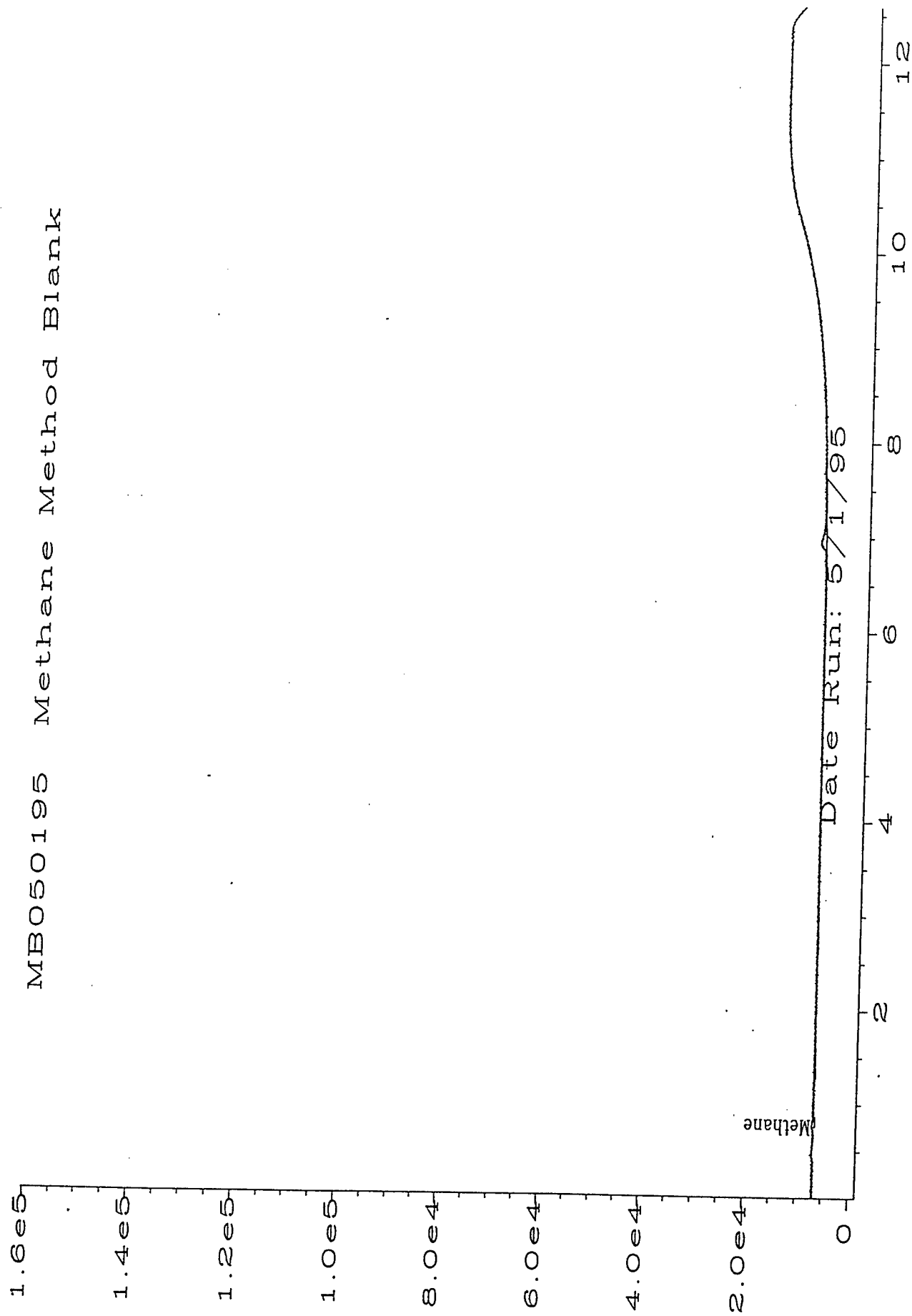


Analyst



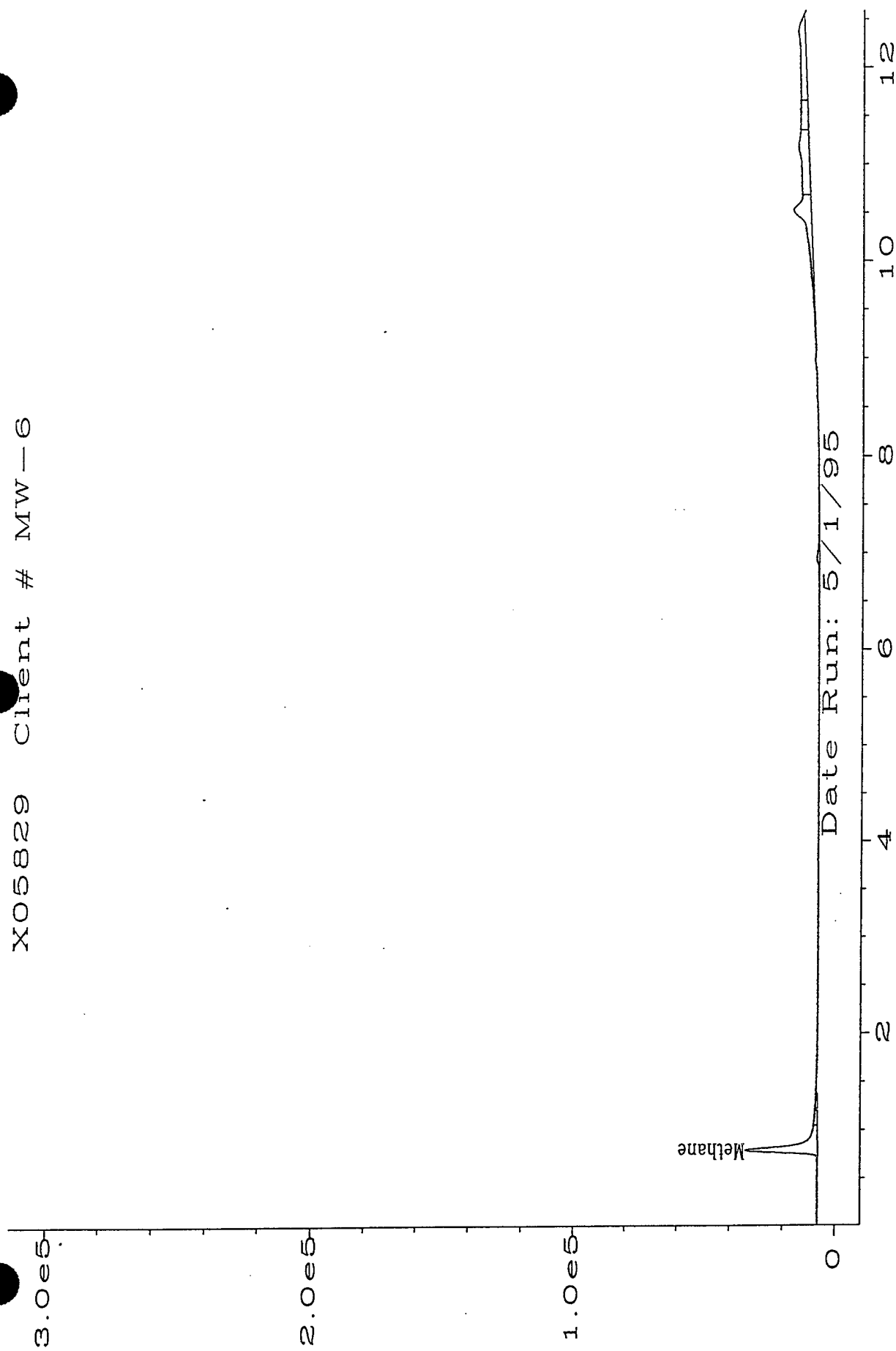
Approved

MB050195 Methane Method Blank



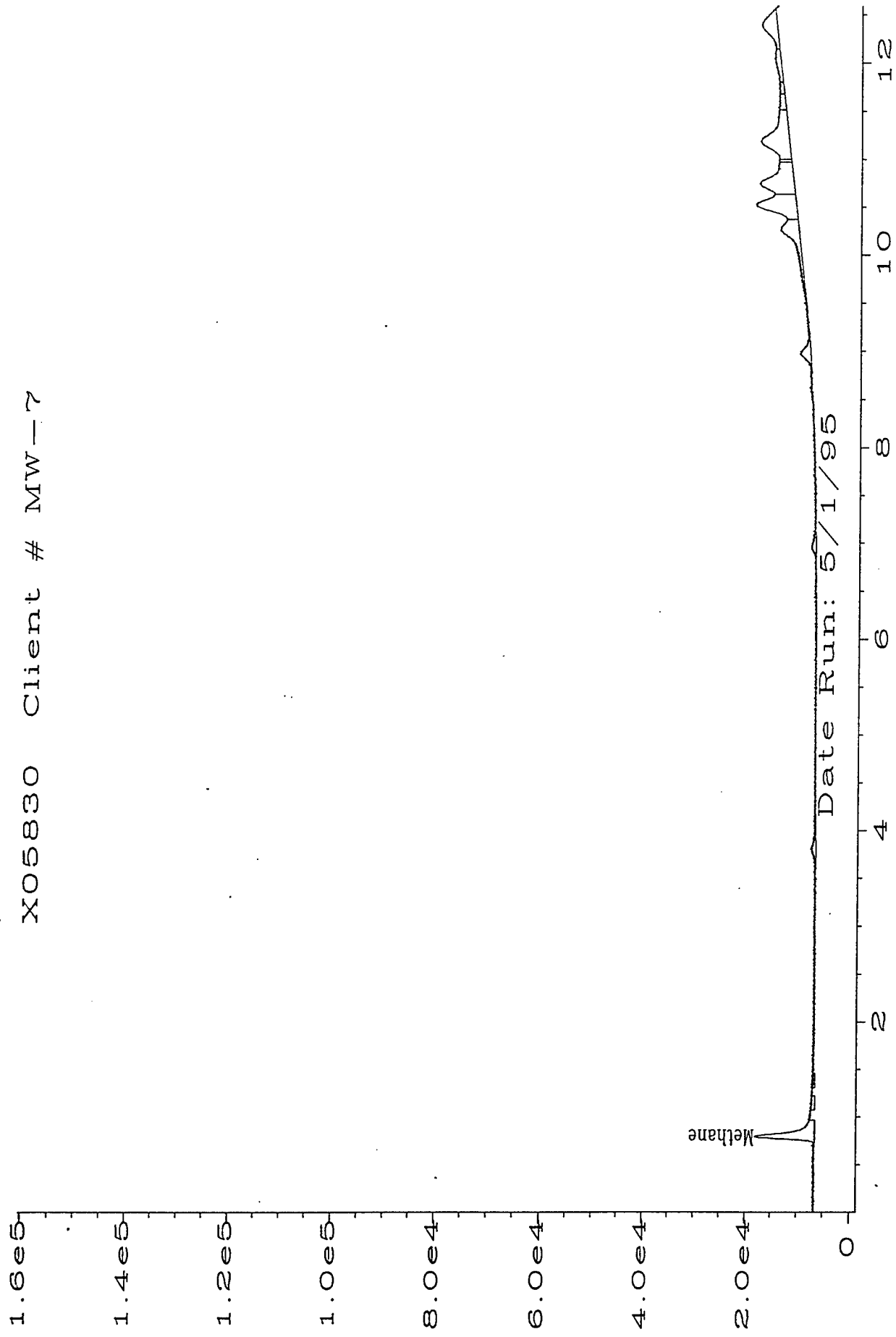
Sig. 2 in C:\HPCHEM\2\DATA\GAS0430\010R0101.D

X05829 Client # MW-6



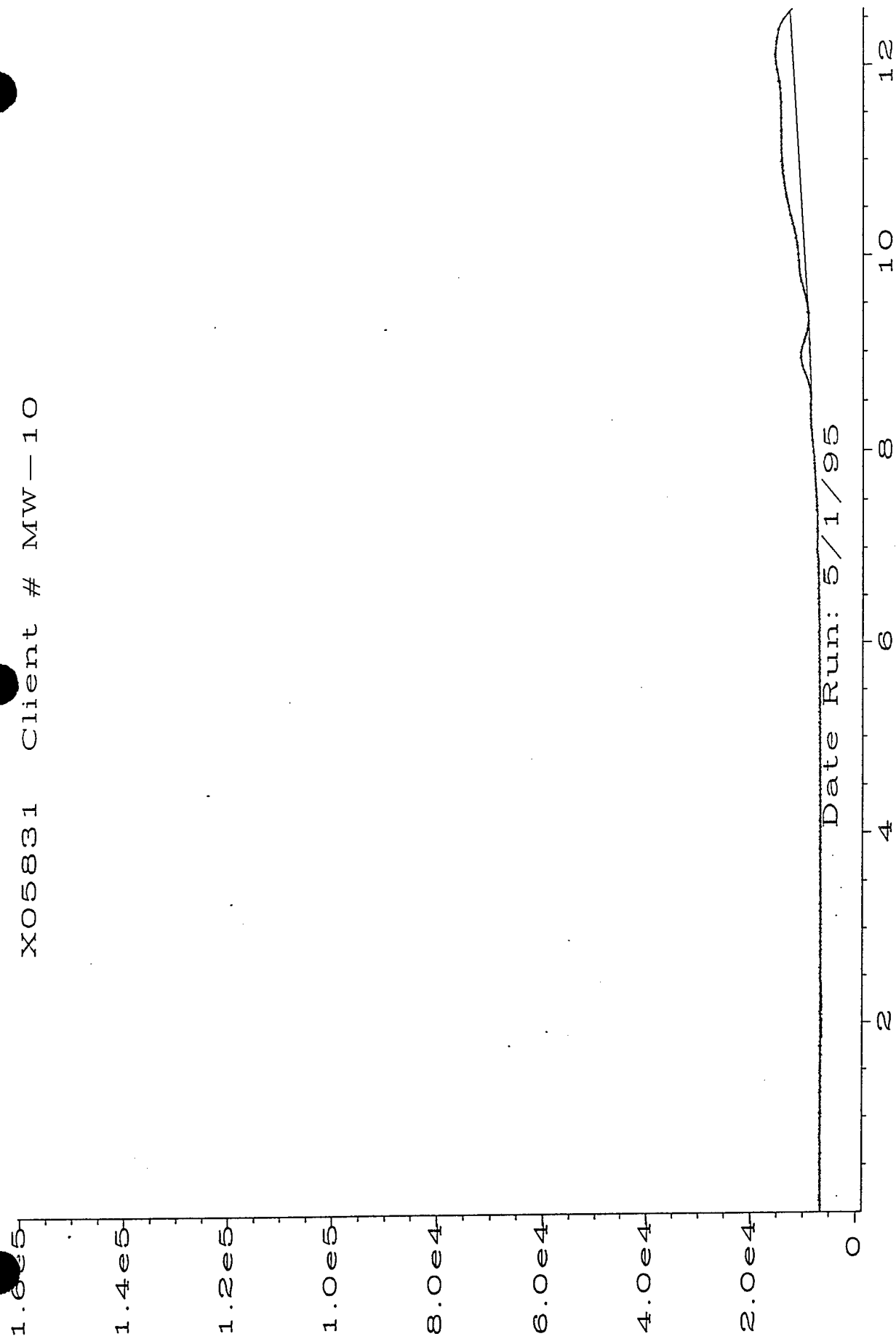
Sig. 2 in C:\HPCHEM\2\DATA\GAS0430\013R0101.D

X05830 Client # MW-7



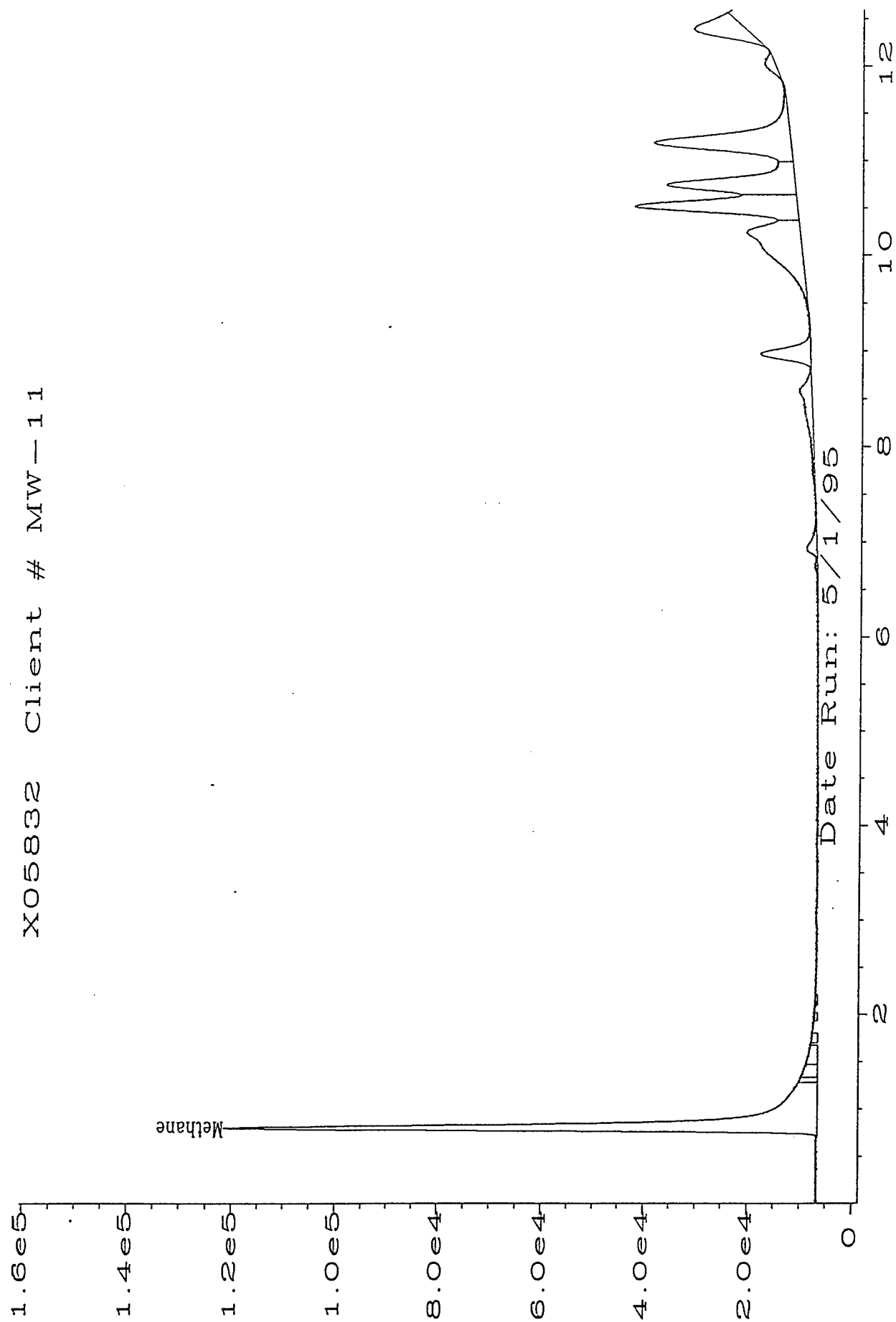
Sig. 2 in C:\HPCHEM\2\DATA\GAS0430\014R0101.D

X05831 Client # MW-10



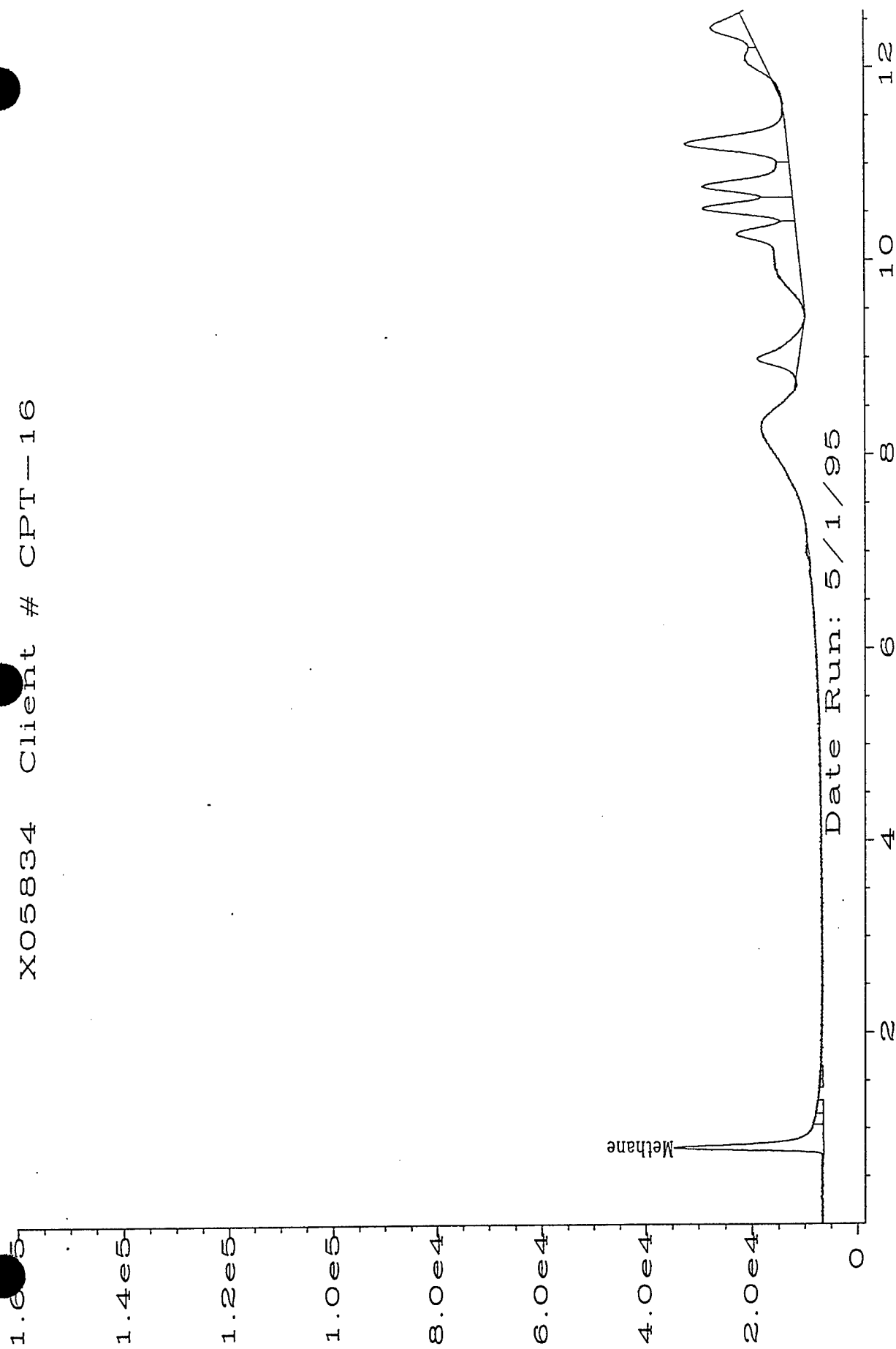
Sig. 2 in C:\HPCHEM\2\DATA\GAS0430\015R0101.D

X05832 Client # MW-11



Sig. 2 in C:\HPCHEM\2\DATA\GAS0430\018R0101.D

X05834 Client # CPT-16



Sig: 2 in C:\HPCHEM\2\DATA\GAS0430\019R0101.D

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4036 Youngfield St. Wheat Ridge, CO 80033
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Miscellaneous Analyses

Date Sampled : 4/17/95	Client Project ID. : 722450.2602/SJAFB
Date Received : 4/18/95	Lab Project No. : 95-1240
Date Prepared : 4/18/95	Detection limit : 0.250 mg/L
Date Analyzed : 4/18/95	Method : EPA 300.0

<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Chloride(mg/L)</u>
X05829	MW-6	Water	13.1
X05829 Dup	MW-6 Dup	Water	13.2
X05831	MW-10	Water	4.97
Method Blank	4/18/95		<0.250

Quality Assurance

	<u>True Value (mg/L)</u>	<u>Result (mg/L)</u>	<u>% Recovery</u>
Alltech Anion Mixture-A Lot # J-I0N01134	20.0	18.9	94.5

Delina V. Byers
Analyst

[Signature]

Approved

1240JJ.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

Date Sampled : 4/17/95	Client Project ID. : 722450.2602/SJAFB
Date Received : 4/18/95	Lab Project No. : 95-1240
Date Prepared : 4/18/95	Detection limit : 0.076 mg/L
Date Analyzed : 4/18/95	Method : EPA 300.0

<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Nitrite-N(mg/L)</u>
X05829	MW-6	Water	<0.076
X05829 Dup	MW-6 Dup	Water	<0.076
X05830	MW-7	Water	<0.076
X05831	MW-10	Water	<0.076
X05832	MW-11	Water	<0.076
X05834	CPT-16	Water	<0.076
Method Blank	4/18/95		<0.076

Quality Assurance**

	<u>True Value (mg/L)</u>	<u>Result (mg/L)</u>	<u>% Recovery</u>
Alltech Anion Mixture-A Lot # J-I0N01134	21.0	19.9	94.8

** = Quality assurance results reported as Nitrite (NO₂)

Debra V. Byers
Analyst

[Signature]

Approved

1240JJ.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

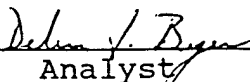
Date Sampled : 4/17/95	Client Project ID. : 722450.2602/SJAFB
Date Received : 4/18/95	Lab Project No. : 95-1240
Date Prepared : 4/18/95	Detection limit : 0.056 mg/L
Date Analyzed : 4/18/95	Method : EPA 300.0

<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Nitrate-N(mg/L)</u>
X05829	MW-6	Water	<0.056
X05829 Dup	MW-6 Dup	Water	<0.056
X05830	MW-7	Water	<0.056
X05831	MW-10	Water	1.17
X05832	MW-11	Water	<0.056
X05834	CPT-16	Water	<0.056
Method Blank	4/18/95		<0.056

Quality Assurance**

	<u>True Value (mg/L)</u>	<u>Result (mg/L)</u>	<u>% Recovery</u>
Alltech Anion Mixture-A Lot # J-I0N01134	20.0	18.7	93.5

** = Quality assurance results reported as Nitrate (NO₃)



Analyst



Approved

1240JJ.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Miscellaneous Analyses

Date Sampled : 4/17/95	Client Project ID. : 722450.2602/SJAFB
Date Received : 4/18/95	Lab Project No. : 95-1240
Date Prepared : 4/18/95	Detection limit : 0.250 mg/L
Date Analyzed : 4/18/95	Method : EPA 300.0

<u>Evergreen</u> <u>Sample #</u>	<u>Client</u> <u>Sample ID</u>	<u>Matrix</u>	<u>Sulfate (mg/L)</u>
X05829	MW-6	Water	4.46
X05829 Dup	MW-6 Dup	Water	4.49
X05830	MW-7	Water	8.47
X05831	MW-10	Water	7.02
X05832	MW-11	Water	1.92
X05834	CPT-16	Water	1.16
Method Blank	4/18/95		<0.250

Quality Assurance

	True Value (mg/L)	Result (mg/L)	% Recovery
Alltech Anion Mixture-A Lot # J-I0N01134	30.0	29.1	97.0

Debra L. Byers
Analyst

[Signature]
Approved

1240JJ.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

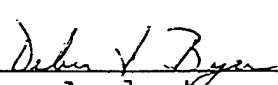
Miscellaneous Analyses

Date Sampled : 4/17/95	Client Project ID. : 722450.2602/SJ AFB
Date Received : 4/18/95	Lab Project No. : 95-1240
Date Prepared : 4/20/95	Matrix : 5.00 mgCaCO ₃ /L
Date Analyzed : 4/20/95	Method : EPA 310.1

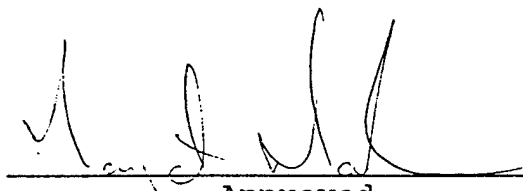
<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Total Alkalinity (mgCaCO₃/L)</u>
X05830	MW-7	Water	25.4
X05830 Dup	MW-7 Dup	Water	24.7
X05831	MW-10	Water	<5.00
X05832	MW-11	Water	88.1
Method Blank	(4/20/95)		<5.00

Quality Assurance

	<u>True Value (mgCaCO₃/L)</u>	<u>Result (mgCaCO₃/L)</u>	<u>% Recovery</u>
APG Minerals reference Lot # 13862	11.8	11.5	97.5



Analyst



Approved

1240JJ.4

Evergreen Analytical Sample Log Sheet

Project # 95-1264

Date(s) Sampled: 4/18/95 COC
Date Received: 4/19/95 1000

Date Due: 4/24-UST, 5/03-OTHERS
Holding Time(s): 05/02-VOA, BTEX, ALK.
4/25-BNA, TVH, TEH.
4/20-ANIONS

Client Project I.D. 722450.2602/SEYMORE JOHNSON AFB

Rush STANDARD

Client: Parsons Engineering Science, Inc.

Shipping Charges N/A

Address: 1700 Broadway Suite 900

E.A. Cooler # 602

Denver, CO 80290

Airbill # FEDEX-4306784941

Contact: TODD WIEDEMEIER

Custody Seal Intact? N

Client P.O. _____

Cooler N/A Bottles N/A

Phone #831-8100 Fax #831-8208

COC Present

Y

Sample Tags Present?

Y

Sample Tags Listed?

Y

Sample(s) Sealed?

Y

Special Invoicing/Billing _____

Special Instructions ALL BTEX AND VOA SAMPLES ARE TO INCLUDE CHLOROBENZENE, TMB AND TEMB UNLESS OTHERWISE NOTED. AN MS/MSD AND LAB DUPLICATE IS TO BE ANALYZED ON X05931 BTEX. *SEE ATTACHED SHEET FOR VOA 624 INSTRUCTIONS.

Lab ID #	Client ID#	Analysis	Mtx	Btl	Loc
X05923A/B/C	CPT-18	* VOA 624	W	40V	9
X05926A/B/C	MW-4	* VOA 624	W	40V	9
X05928A/B/C	MW-12D	* VOA 624	W	40V	9
X05931A/B/C	MW-5	* VOA 624	W	40V	9
X05932A/B/C	MW-8	* VOA 624	W	40V	9
X05933A/B/C	MW-3	* VOA 624	W	40V	9
X05926D	MW-4	BNA 625	W	80A	D6
X05921A/B	TRIP BLANK	BTEX 602	W	40V	2
X05922A/B	CPT-17	BTEX 602	W	40V	2
X05923D/E	CPT-18	BTEX 602	W	40V	2
X05924A/B	FIELD BLANK	BTEX 602	W	40V	2
X05925A/B	CPT-19	BTEX 602	W	40V	2
X05926E/F	MW-4	BTEX 602	W	40V	2
X05926Q/R	MW-4 DUPE	BTEX 602	W	40V	2
X05928D/E	MW-12D	BTEX 602	W	40V	2
X05929A/B	TRIP BLANK	BTEX 602	W	40V	2
X05931D/E/F/G	MW-5 (+MS/MSD)	BTEX 602	W	40V	2
X05930A/B	MW-13	BTEX 602	LW	40V	10

R=Sample to be returned

Route GC/MS 2 GC 4 Metals 1 Wet Chem 3 SxPrep 3 Acctg 1

SxRec C QA/QC C Sales C File Orig

dm 4/24/95

R=Sample to be returned

AB ID	CLIENT ID	ANALYSIS	MTX	BTL	LOC
X05932D/E	MW-8	BTEX 602	W	40V	2
X05933D/E	MW-3	BTEX 602	W	40V	2
X05922C/D	CPT-17	TVPH	W	40V	2
X05923F/G	CPT-18	TVPH	W	40V	2
X05925C/D	CPT-19	TVPH	W	40V	2
X05926G/H	MW-4	TVPH	W	40V	2
X05926S/T	MW-4 DUPE	TVPH	W	40V	2
X05928F/G	MW-12D	TVPH	W	40V	2
X05931H/I	MW-5	TVPH	W	40V	9
X05932F/G	MW-8	TVPH	W	40V	9
X05933F/G	MW-3	TVPH	W	40V	9
X05922E	CPT-17	TEPH JET	W	1LA	D6
X05923H	CPT-18	TEPH JET	W	1LA	D6
X05925E	CPT-19	TEPH JET	W	1LA	D6
X05926I	MW-4	TEPH JET	W	1LA	D6
X05926U	MW-4 DUPE	TEPH JET	W	1LA	D6
X05928H	MW-12D	TEPH JET	W	1LA	D6
X05931J	MW-5	TEPH JET	W	1LA	D6
X05932H	MW-8	TEPH JET	W	1LA	D6
X05933H	MW-3	TEPH JET	W	1LA	D6
X05923I	CPT-18	ALKALINITY	W	125P	D6
X05926J	MW-4	ALKALINITY	W	125P	D6
X05928I	MW-12D	ALKALINITY	W	125P	D6
X05931K	MW-5	ALKALINITY	W	125P	D6

5932I	MW-8	ALKALINITY	W	125P	D6
X05922F/G/H/I	CPT-17	METHANE	W	40V	2
X05923J/K/L/M	CPT-18	METHANE	W	40V	2
X05925F/G/H/I	CPT-19	METHANE	W	40V	2
X05926K/L/M/N	MW-4	METHANE	W	40V	2
X05928J/K/L/M	MW-12D	METHANE	W	40V	2
X05931L/M/N/O	MW-5	METHANE	W	40V	2
X05932J/K/L/M	MW-8	METHANE	W	40V	2
X05933I/J/K/L	MW-3	METHANE	W	40V	2
X05922J	CPT-17	CL-, SO4, NITRATE, NITRITE	W	125P	D6
X05923N	CPT-18	CL-, SO4, NITRATE, NITRITE	W	125P	D6
X05925J	CPT-19	CL-, SO4, NITRATE, NITRITE	W	125P	D6
X05926O	MW-4	CL-, SO4, NITRATE, NITRITE	W	125P	D6
5928N	MW-12D	SO4, NITRATE, NITRITE	W	125P	D6
X05931P	MW-5	SO4, NITRATE, NITRITE	W	125P	D6
X05932N	MW-8	SO4, NITRATE, NITRITE	W	125P	D6
X05933M	MW-3	SO4, NITRATE, NITRITE	W	125P	D6
X05926P	MW-4	3010 Pb	W	500P	D6
X05928O	MW-12D	3010 Pb	W	500P	D6

PROJECT SPECIAL INSTRUCTIONS

95-
94 1264

Date: 4/20 EAL Contact: Patty Client Contact: John W. Parsons E.E.

INSTRUCTIONS:

✓ X05923 - extra bottle for alkalinity (not on C.O.C.)
should be analyzed.

MTBE should not be analyzed w/ BTEX

{ X05923, X05926 - Method 624 should include
MTBE, EDB, isopropyl ether, chlorobenzene,
1,2-DCB, 1,3-DCB, 1,4-DCB, dichlorodifluoromethane
and trichlorofluoromethane.
X05928, X05931, X05932 & X05933 also.

✓ X05930 - free product. analyze for BTEX only

✓ TVPH labeled as Jet should be gasoline

✓ TEPH labeled as diesel should be Jet

Date & Time Rec'd: 4/19/95 Shipped Via: Fedex 806784941
(Airbill # if applicable)

Client: Poulsen ES

Client Project ID(s): 722450, 2602

EAL Project #(s): 95-1264 EAL Cooler(s): (Y) N

Cooler# Client 602

Ice packs (Y) N (Y) N Y N Y N Y N

Temperature °C 3° 3°

- | | Y | N | N/A |
|--|---------------|---------------|---------------|
| 1. Custody seal(s) present:
Seals on cooler intact
Seals on bottle intact | <u> </u> | <u>✓</u> | <u>✓</u> |
| 2. Chain of Custody present: | <u>✓</u> | <u> </u> | <u> </u> |
| 3. Containers broken or leaking:
(Comment on COC if Y) | <u> </u> | <u>✓</u> | <u> </u> |
| 4. Containers labeled: | <u>✓</u> | <u> </u> | <u> </u> |
| 5. COC agrees w/ bottles received:
(Comment on COC if N) | <u>✓</u> | <u> </u> | <u> </u> |
| 6. COC agrees w/ labels:
(Comment on COC if N) | <u>✓</u> | <u> </u> | <u> </u> |
| 7. Headspace in VOA vials-waters only
(comment on COC if Y) | <u> </u> | <u>✓</u> | <u>time</u> |
| 8. VOA samples preserved: | <u>✓</u> | <u> </u> | <u>time</u> |
| 9. pH measured on metals, cyanide or phenolics*:
List discrepancies <u> </u>
*Non-EAL provided containers only, water samples only. | <u> </u> | <u> </u> | <u>✓</u> |
| 10. Metal samples present:
Total <u> </u> , Dissolved <u> </u>
D or PD to be filtered:
T,TR,D,PD to be Preserved: | <u> </u> | <u> </u> | <u>✓</u> |
| 11. Short holding times:
Specify parameters <u> </u> | <u> </u> | <u>✓</u> | <u> </u> |
| 12. Multi-phase sample(s) present: | <u> </u> | <u>✓</u> | <u> </u> |
| 13. COC signed w/ date/time: | <u>✓</u> | <u> </u> | <u> </u> |

Comments: Bottle CPT-18 for alkalinity not on C.O.C. Free product sample is not assigned an analysis.

(Additional comments on back)

Custodian Signature/Date: Lee Connor 4/19/95

CHAIN OF CUSTODY RECORD ANALYTICAL SERVICES REQUEST

Page 1 of 1

Evergreen Analytical Inc.

4036 Youngfield St.
Wheat Ridge, Colorado 80033
(303) 425-6021
FAX (303) 425-6854
(800) 845-7400

COMPANY Parsons ES

ADDRESS 401 Harrison Oaks Blvd.

CITY Cary STATE NC ZIP 27513

PHONE# (919) 677-0080

FAX # (919) 677-0118

CLIENT CONTACT (print)

PROJECT ID. 722450.2602

EAL QUOTE # P.O.#

TURNAROUND REQUIRED*

*expedited turnaround subject to additional fee

Sampler Name: Michael A. Baskin
(signature) MICHAEL A. BASKIN
(print) MICHAEL A. BASKIN

Evergreen Analytical Cooler No. 638

Cooler Received

Please PRINT

all information:

CLIENT SAMPLE IDENTIFICATION DATE SAMPLED TIME

MW-12D	4/18/95	1200
trip blank	4/18/95	
MW-13	4/18/95	1345
MW-5 (+MS/MSD)	4/18/95	1400
MW-8	4/18/95	1500
MW-3	4/18/95	1550

MATRIX		ANALYSIS REQUESTED																		EAL Sample No.		
No. of Containers	Water-Drinking/Discharge/Ground (circle)	Soil / Solid (circle)	Oil / Sludge	TCLP VOA/BNA/Pest/Herb/Metals (circle)	VOA 8260/624/524.2 (circle)	BNA 8270/625 (circle)	Pesticides 8080/608 (circle)	Pest/PCBs 8080/608/508 (circle)	Herbicides 8150/515 (circle)	PCB Screen	BTEX 8020/602 (circle)/MTBF (circle)	TPRH 418.1/Oil & Grease 413.1 (circle)	TVPH 8015mod. (Gasoline) Jet	TEPH 8015mod. (Diesel)	Total Metals-DW / NPDES / SW846 (circle & list metals below)	Dissolved Metals - DW / SW846 (circle & list metals below)	Alkalinity	Methane	Ammonia (Gas, n, h, k, n, i, t)	Ammonia (LI, 50% n, h, k, n, i, t)	3010 Lead	Free Product
15	✓				3						2	2	2	1	1	1	1	1	1	1	1	2
2	✓																					
2	✓				3						2	2	2	1	1	1	1	1	1			
14	✓				3						2	2	2	1	1	1	1	1	1			
13					3						2	2	2	1	1	1	1	1	1			

EAL use only
Do not write
in shaded area

EAL Project #
Custodian

Instructions: For Free Product sample - analyses to be determined

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<u>Michael A. Baskin</u>	4/18/95						

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB042195
Date Prepared : 4/21/95
Date Analyzed : 4/21/95


Client Project No. : 722450.26020
Lab Project No. : 95-1264
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2042110

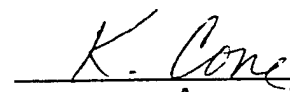
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		100%	70%-130% (QC limits)

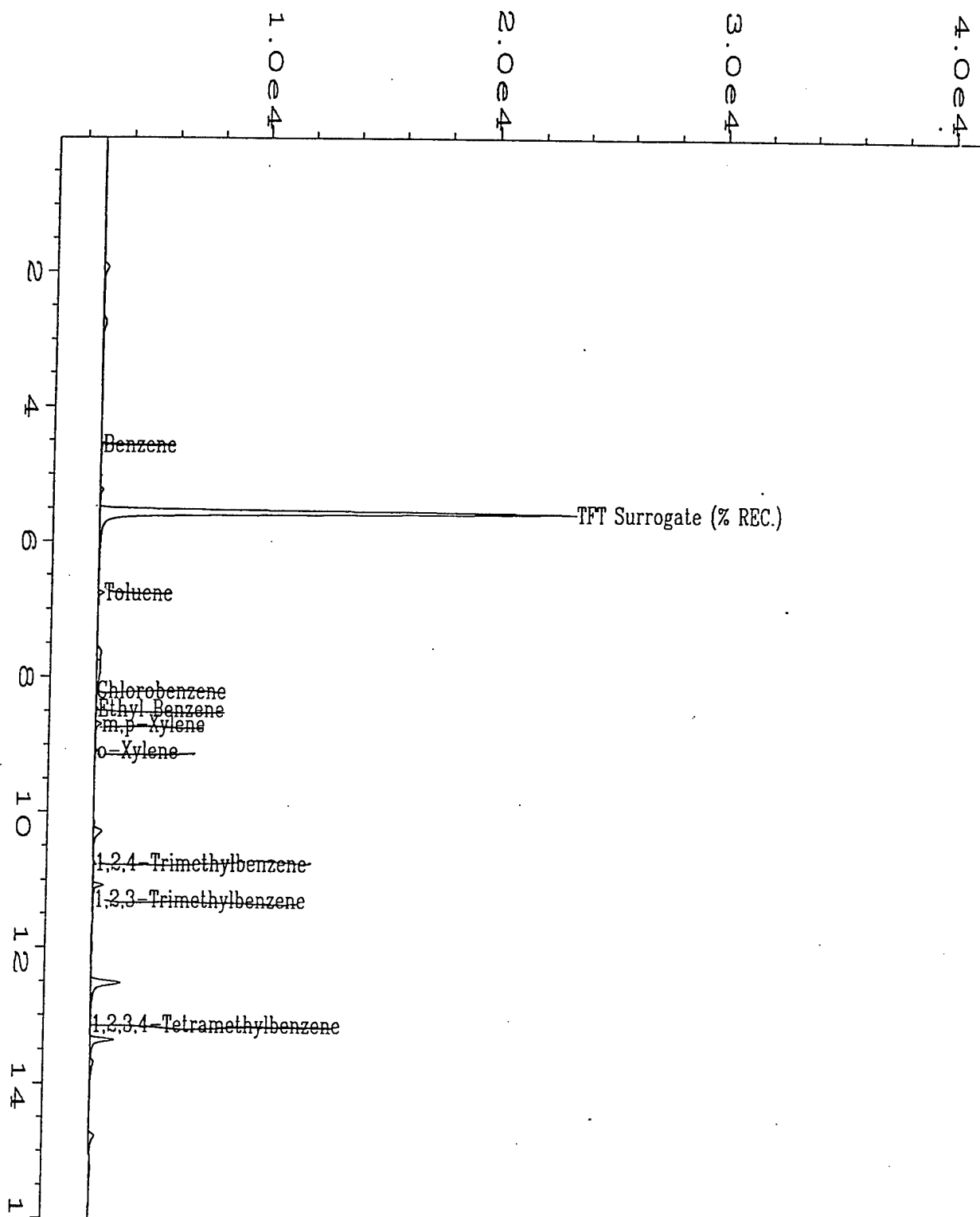
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



user modified

Data File Name	: C:\HPCHEM\2\DATA\BX20421\010R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB042195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.MTH
Acquired on	: 21 Apr 95 03:07 PM	Analysis Method	: BX20421.MTH
Test Created on	: 21 Apr 95 03:29 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 1		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB042495
Date Prepared : 4/24/95
Date Analyzed : 4/25/95

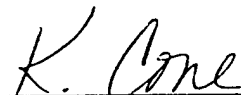
Client Project No. : 722450.26020
Lab Project No. : 95-1264
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2042410

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	0.7	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.4	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	NA	NA
Surrogate Recovery (α,α,α -Trifluorotoluene):		81%	70%-130% (QC limits)

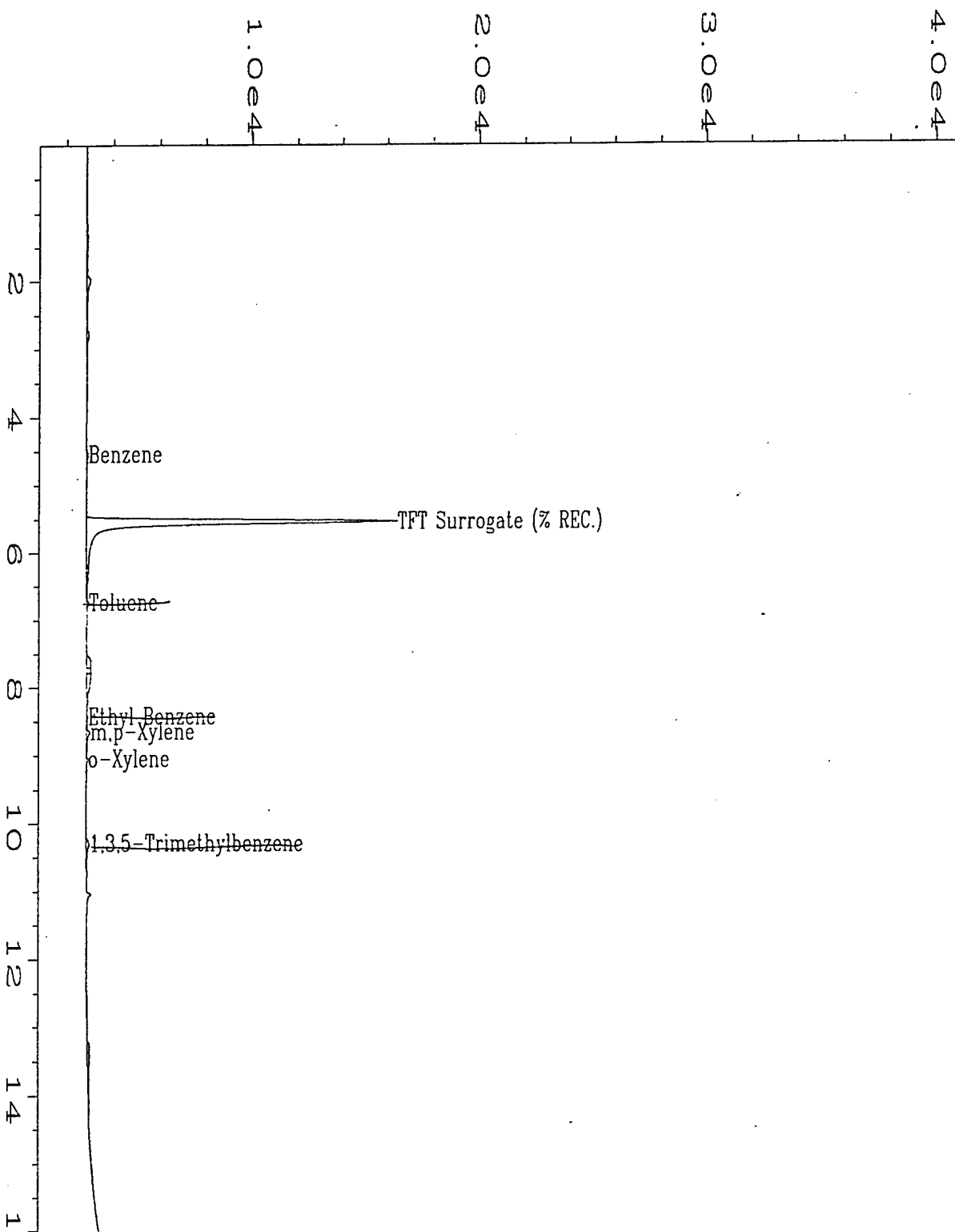
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



user modified

Data File Name	: C:\HPCHEM\2\DATA\BX20424\010R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MB042495	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20424.MTH
Acquired on	: 25 Apr 95 01:45 AM	Analysis Method	: BX20424.MTH
Report Created on:	25 Apr 95 11:04 AM	Sample Amount	: 0
Last Recalib on	: 25 Apr 95 10:43 AM	ISTD Amount	:
Multiplier	: 1		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report
Method Blank Report

Method Blank Number : MB042595
Date Prepared : 4/25/95
Date Analyzed : 4/25/95

Client Project No. : 722450.26020
Lab Project No. : 95-1264
Dilution Factor : 1.00
Method : 602/8020
Matrix : Water
Lab File No. : BX2042511

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.5	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	1.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		93%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

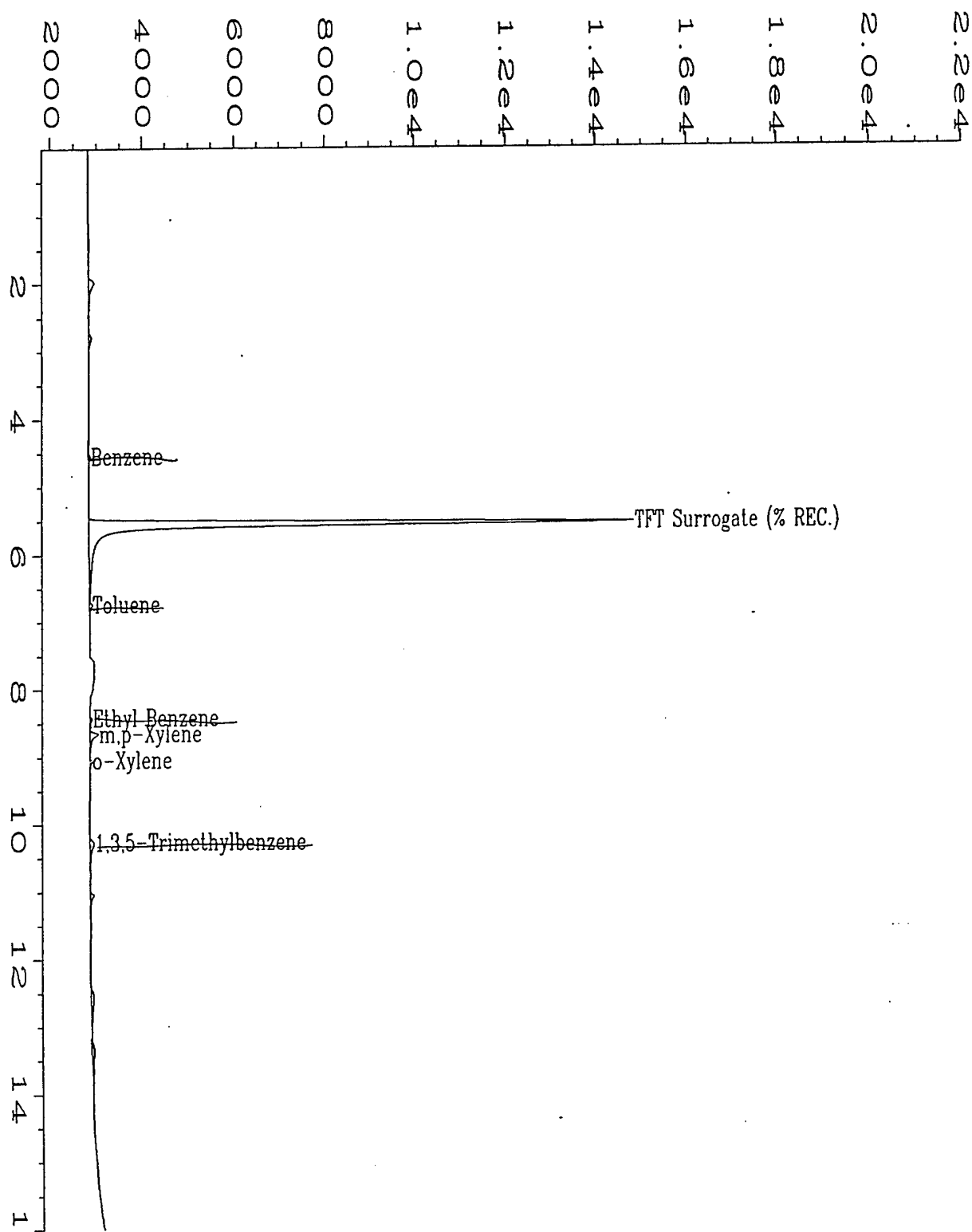
NA = Not Available/Not Applicable.

K. Cone

Analyst

AmCelleb

Approved



user modified

Data File Name : D:\2\DATA\BX20425\011R0101.D
 Operator : S.W. Tyson
 Instrument : BTEX2
 Sample Name : MB042595
 Run Time Bar Code:
 Acquired on : 25 Apr 95 03:02 PM
 Report Created on: 01 May 95 02:46 PM
 Last Recalib on : 26 APR 95 09:49 AM
 Multiplier : 1

Page Number : 1
 Vial Number : 11
 Injection Number : 1
 Sequence Line : 1
 Instrument Method: BX20425.MTH
 Analysis Method : BX20425.MTH
 Sample Amount : 0
 ISTD Amount :

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report
Method Blank Report

Method Blank Number	: MEB2050295	Client Project No.	: 722450.2602/Seymour Johnson AFB
Date Extracted/Prepared	: 5/2/95	Lab Project No.	: 95-1264
Date Analyzed	: 5/2/95	Dilution Factor	: 1.00
% Moisture	: NA	Method	: 602/8020
		Matrix	: Water
		Lab File No.	: BX2050214

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	0.5	0.4
3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4

Surrogate Recovery (α,α,α -Trifluorotoluene):	101%	70%-130% (QC limits)
---	------	----------------------

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

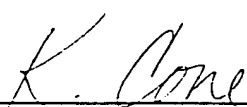
B = Compound also found in the blank.

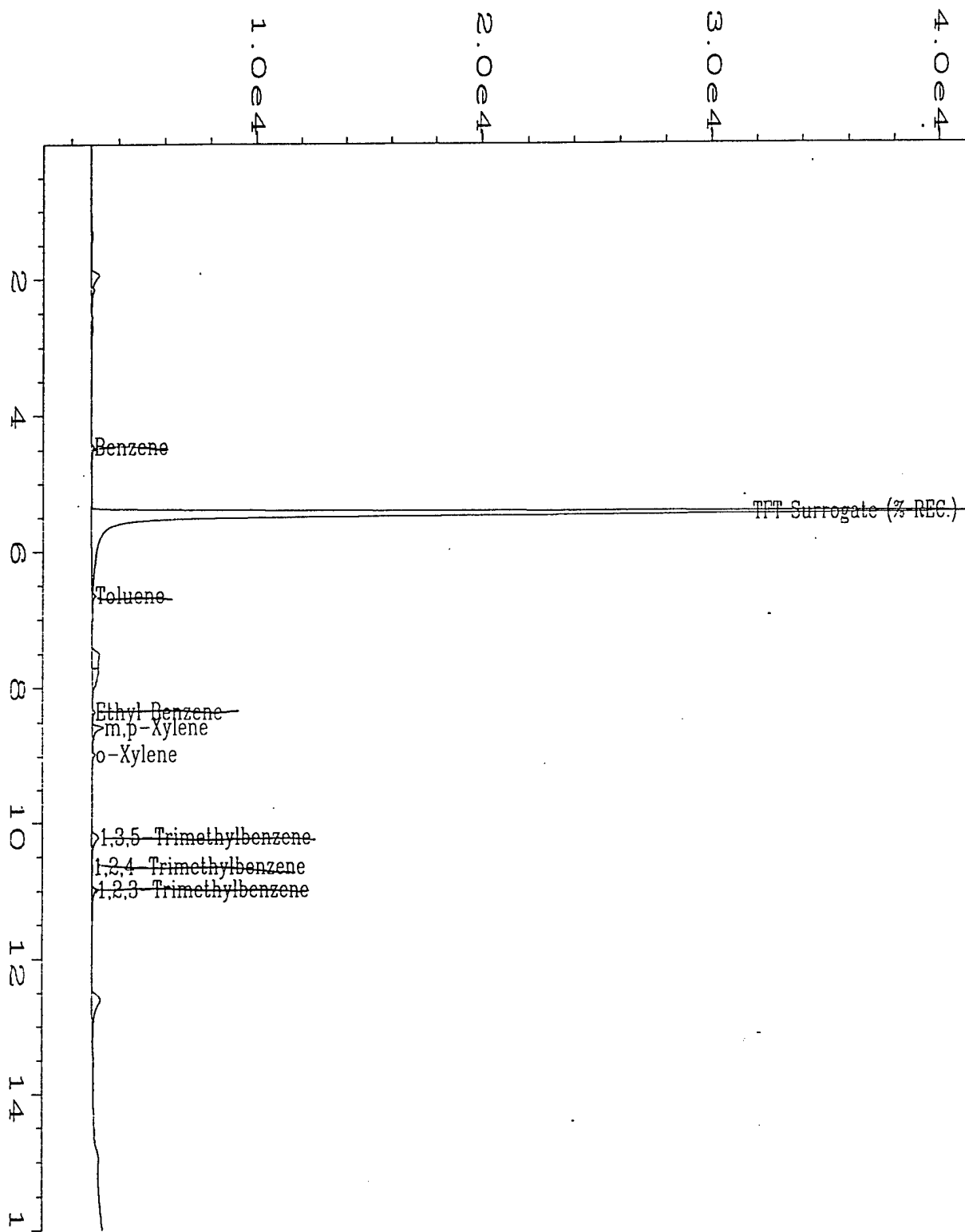
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20502\014R1001.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: MEB2050295	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20502.MTH
Printed on	: 02 May 95 06:19 PM	Analysis Method	: BX20502A.MTH
Report Created on:	: 03 May 95 02:56 PM	Sample Amount	: 0
Last Recalib on	: 03 MAY 95 02:37 PM	ISTD Amount	:
Multiplier	: 1		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: Trip Blank	Client Project No.	: 722450.26020
Lab Sample Number	: X05921	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042116
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		101%	70%-130% (QC limits)

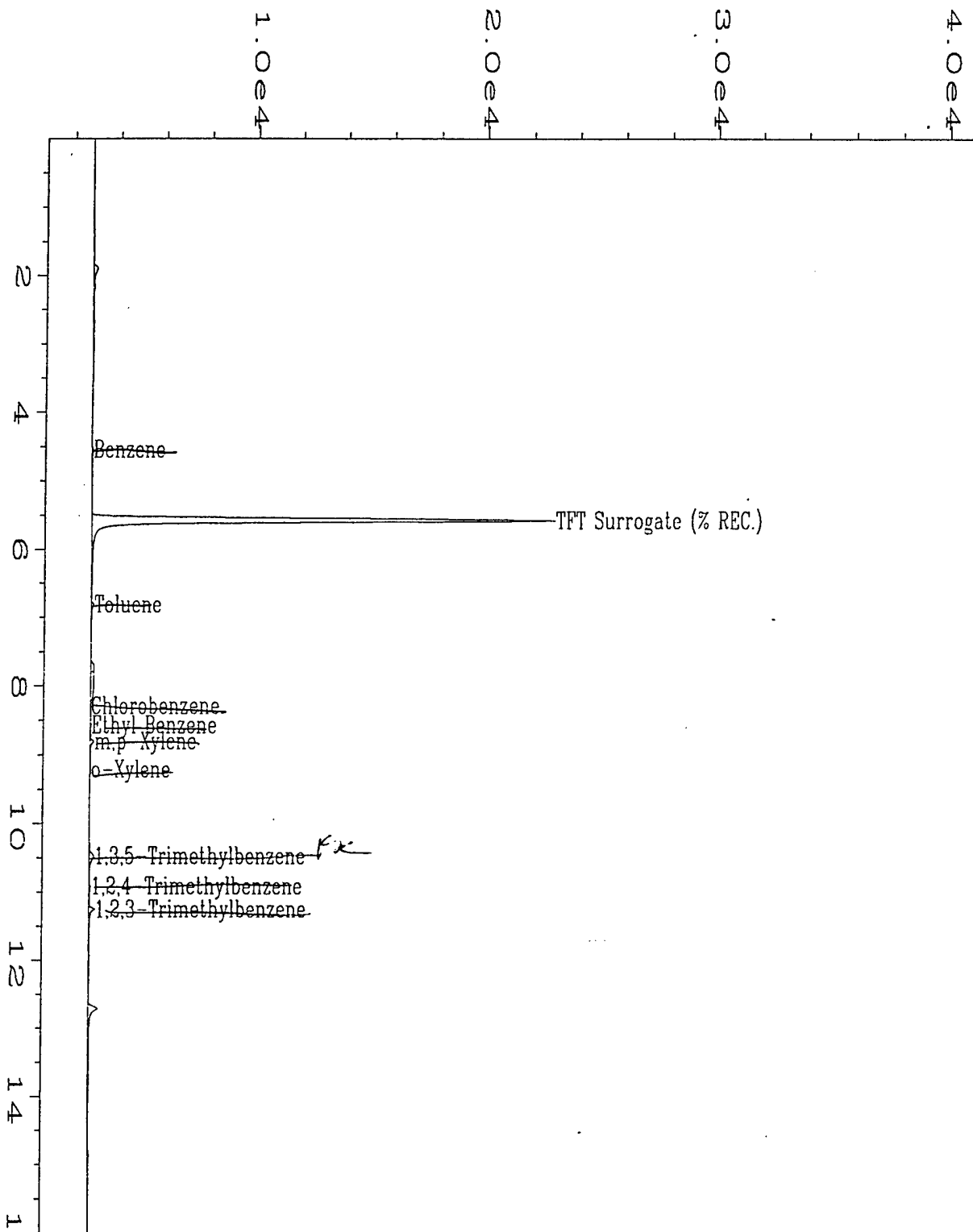
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\016R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05921;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20421.MTH
Acquired on	: 21 Apr 95 06:54 PM	Analysis Method	: BX20421.MTH
Port Created on:	21 Apr 95 07:10 PM	Sample Amount	: 0
Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1264; TRIP BLANK; 5 ML WATER		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: CPT-17	Client Project No.	: 722450.26020
Lab Sample Number	: X05922	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 20.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/24/95	Matrix	: Water
Date Analyzed	: 4/25/95	Lab File No.	: BX2042416
		Method Blank No.	: MB042495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	61 B	8.0
Toluene	108-88-3	18	8.0
Chlorobenzene	108-90-7	U	8.0
Ethyl Benzene	100-41-4	88	8.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	260 B	8.0
1,3,5-Trimethylbenzene	108-67-8	U	8.0
1,2,4-Trimethylbenzene	95-63-6	53	8.0
1,2,3-Trimethylbenzene	526-73-8	15	8.0
1,2,3,4-Tetramethylbenzene	488-23-3	**	**
Surrogate Recovery (α,α,α -Trifluorotoluene):		74%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See DF=50, BX2042127.

QUALIFIERS:

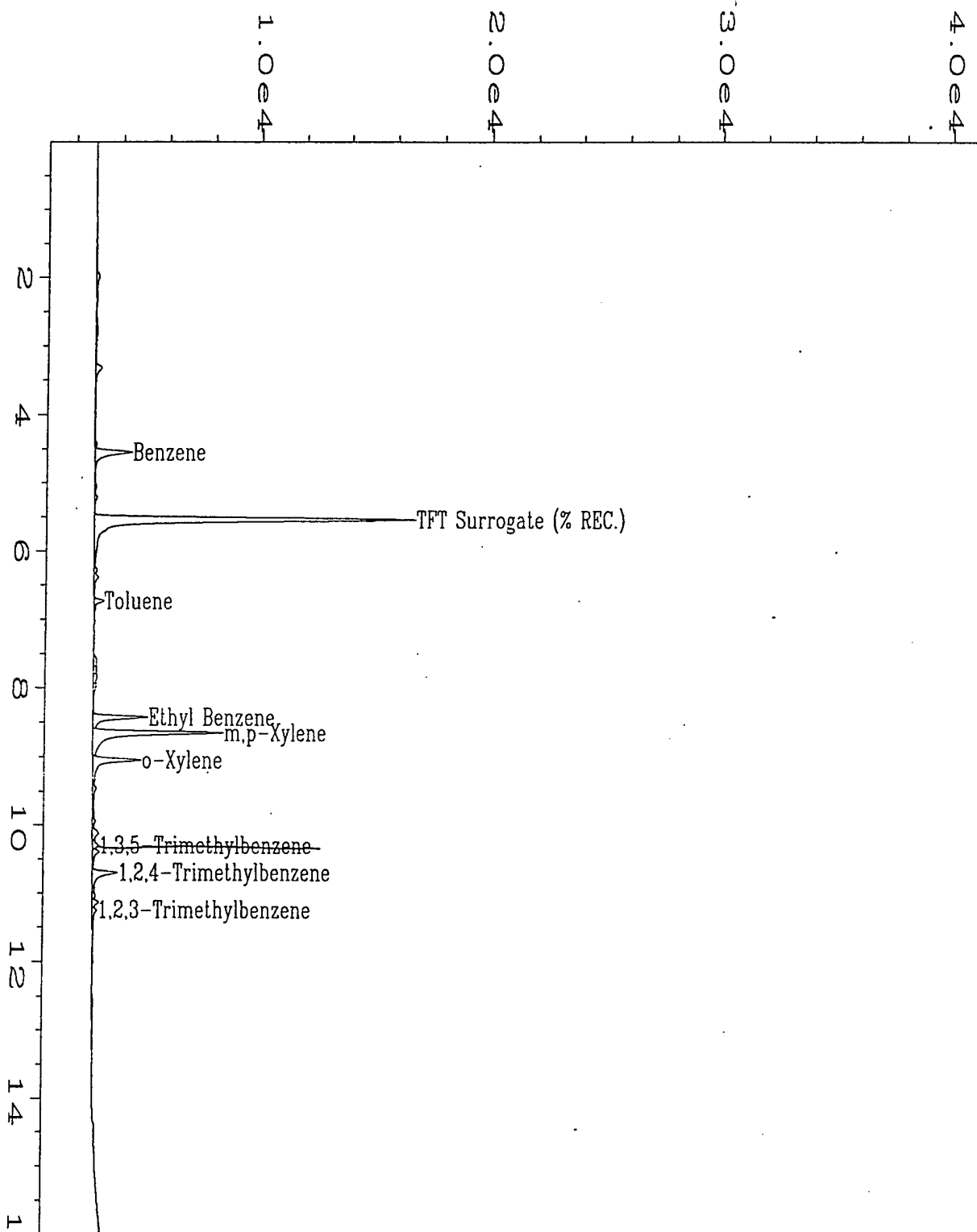
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone

Analyst

A. McClellan

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20424\016R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05922;20;0.250	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20424.MTH
Acquired on	: 25 Apr 95 05:39 AM	Analysis Method	: BX20424.MTH
Report Created on:	: 25 Apr 95 11:15 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 10:43 AM	ISTD Amount	:
Multiplier	: 20		
Sample Info	: Project#: 95-1264	Client#:	CPT-17
			WATER

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: CPT-17	Client Project No.	: 722450.26020
Lab Sample Number	: X05922	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 50.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 2/21/95	Matrix	: Water
Date Analyzed	: 2/22/95	Lab File No.	: BX2042127
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	**
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	28	20
Surrogate Recovery (α,α,α -Trifluorotoluene):		94%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See DF=20, BX2042416.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

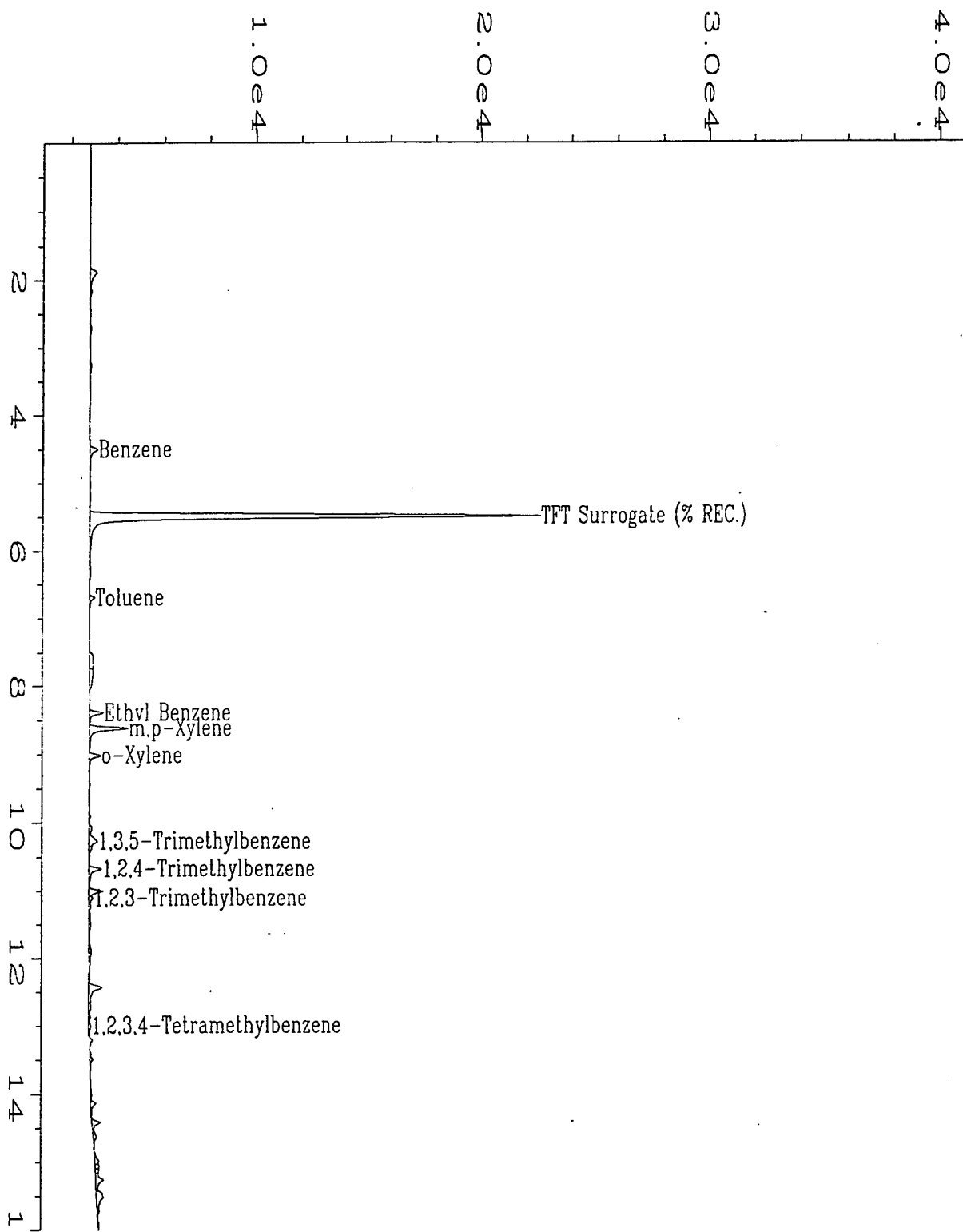
NA = Not Available/Not Applicable.



Analyst



Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\027R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 27
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05922;50;0.1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20421.MTH
Acquired on	: 22 Apr 95 01:29 AM	Analysis Method	: BX20421.MTH
Port Created on:	22 Apr 95 01:32 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 50		
Sample Info	: 95-1264; CPT-17; 0.100 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: CPT-18	Client Project No.	: 722450.26020
Lab Sample Number	: X05923	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 100.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/22/95	Lab File No.	: BX2042128
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	820	40
Toluene	108-88-3	200	40
Chlorobenzene	108-90-7	U	40
Ethyl Benzene	100-41-4	170	40
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	500	40
1,3,5-Trimethylbenzene	108-67-8	72	40
1,2,4-Trimethylbenzene	95-63-6	220	40
1,2,3-Trimethylbenzene	526-73-8	74	40
1,2,3,4-Tetramethylbenzene	488-23-3	120	40
Surrogate Recovery (α,α,α -Trifluorotoluene):		93%	70%-130% (QC limits)

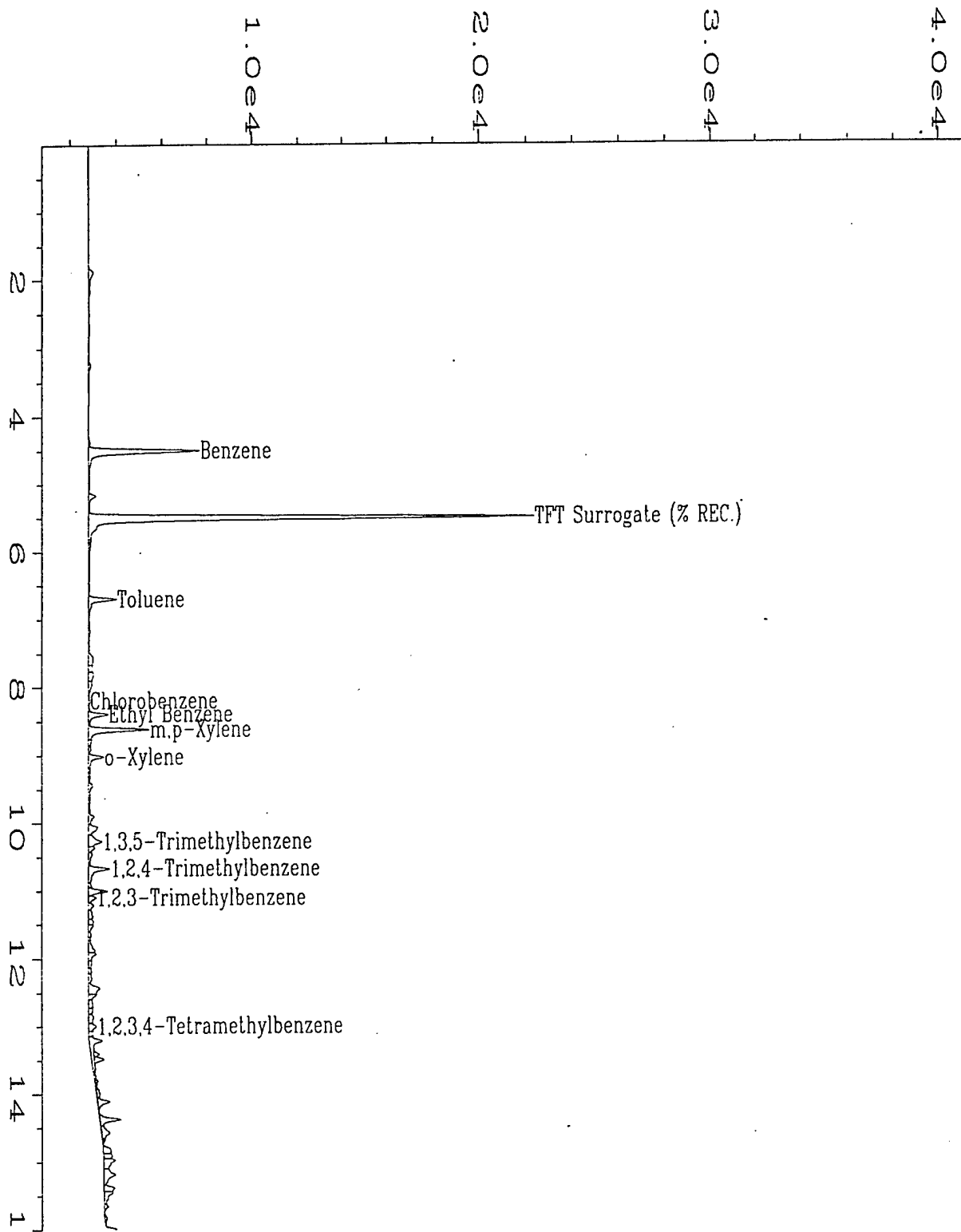
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\028R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 28
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05923;100;0.05	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.MTH
Required on	: 22 Apr 95 02:05 AM	Analysis Method	: BX20421.MTH
Report Created on	: 22 Apr 95 02:21 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 100		
Sample Info	: 95-1264; CPT-18; 0.050 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: Field Blank	Client Project No.	: 722450.26020
Lab Sample Number	: X05924	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042117
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		92%	70%-130% (QC limits)

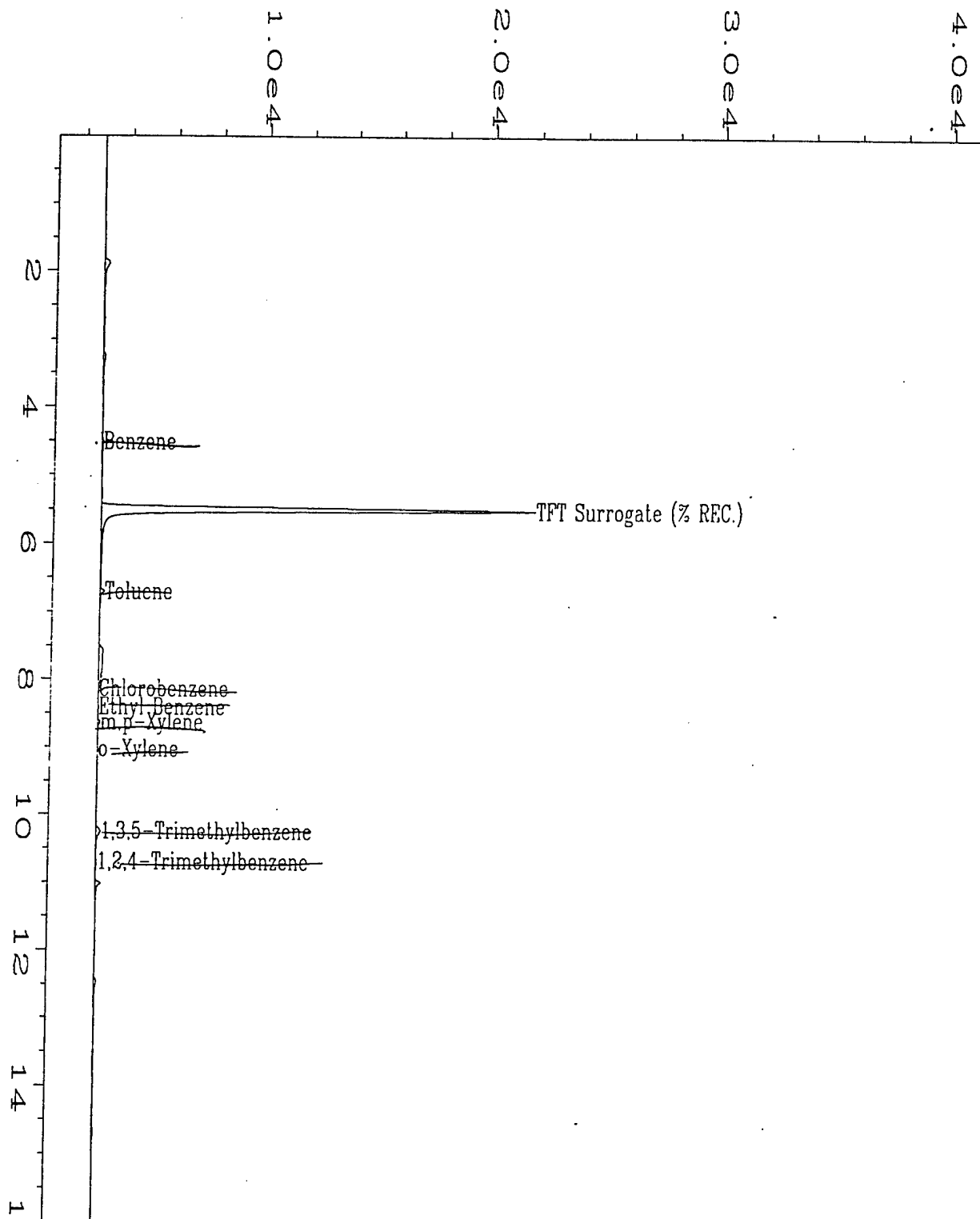
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\017R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 17
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05924;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20421.MTH
Acquired on	: 21 Apr 95 07:30 PM	Analysis Method	: BX20421.MTH
Report Created on:	21 Apr 95 07:46 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1264; FIELD BLANK; 5 ML WATER		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report


Client Sample Number	: CPT-19	Client Project No.	: 722450.26020
Lab Sample Number	: X05925	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042118
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		104%	70%-130% (QC limits)

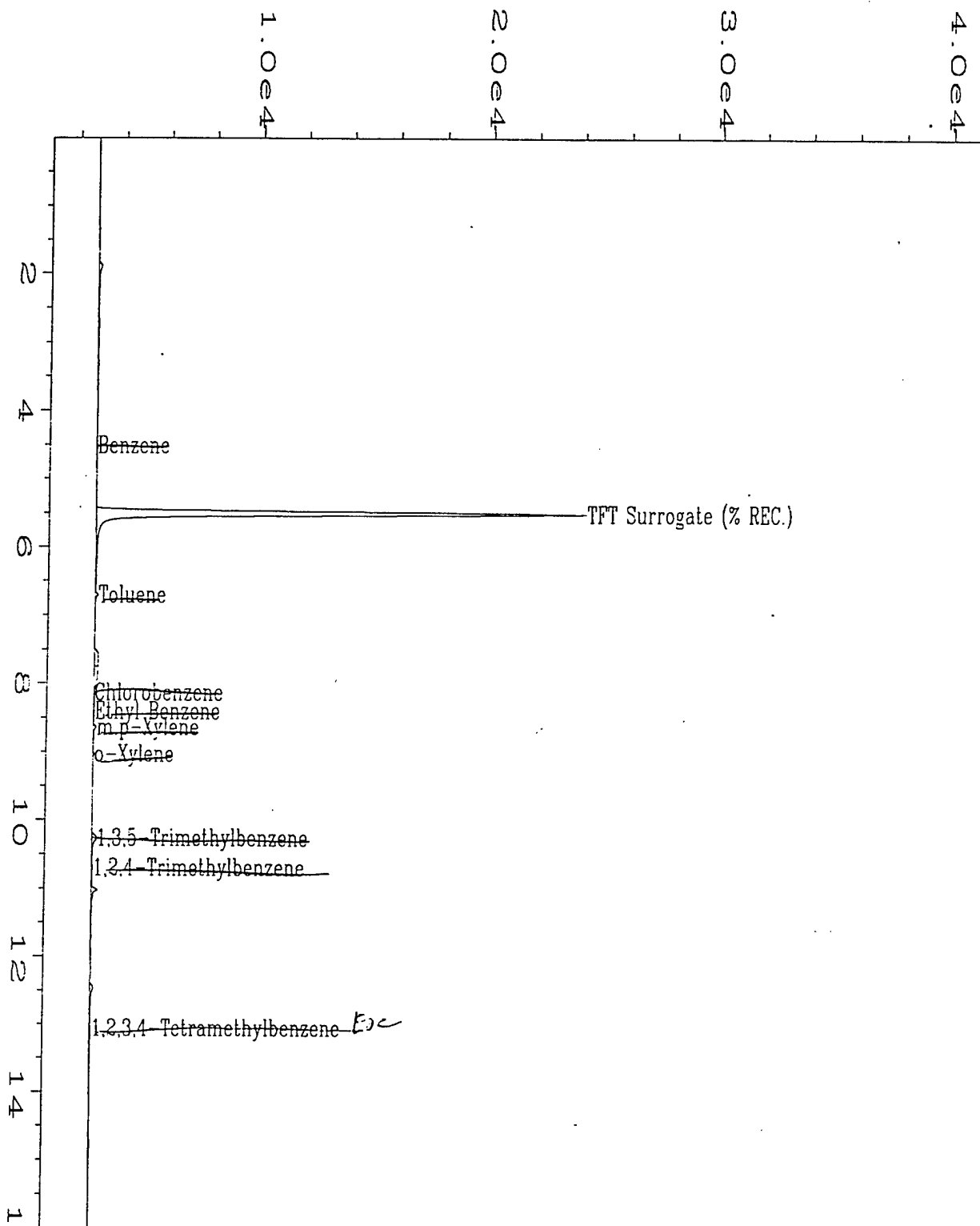
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\018R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 18
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05925;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.MTH
Acquired on	: 21 Apr 95 08:06 PM	Analysis Method	: BX20421.MTH
Report Created on:	: 22 Apr 95 12:55 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1264; CPT-19; 5 ML WATER		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number : MW-4
Lab Sample Number : X05926
Date Sampled : 4/18/95
Date Received : 4/19/95
Date Prepared : 4/21/95
Date Analyzed : 4/22/95

Client Project No. : 722450.26020
Lab Project No. : 95-1264
Dilution Factor : 100.00
Method : 602
Matrix : Water
Lab File No. : BX2042126
Method Blank No. : MB042195


Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	2100	40
Toluene	108-88-3	3100	40
Chlorobenzene	108-90-7	U	40
Ethyl Benzene	100-41-4	980	40
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	6400	40
1,3,5-Trimethylbenzene	108-67-8	200	40
1,2,4-Trimethylbenzene	95-63-6	830	40
1,2,3-Trimethylbenzene	526-73-8	170	40
1,2,3,4-Tetramethylbenzene	488-23-3	67	40
Surrogate Recovery (α,α,α -Trifluorotoluene):		89%	70%-130% (QC limits)

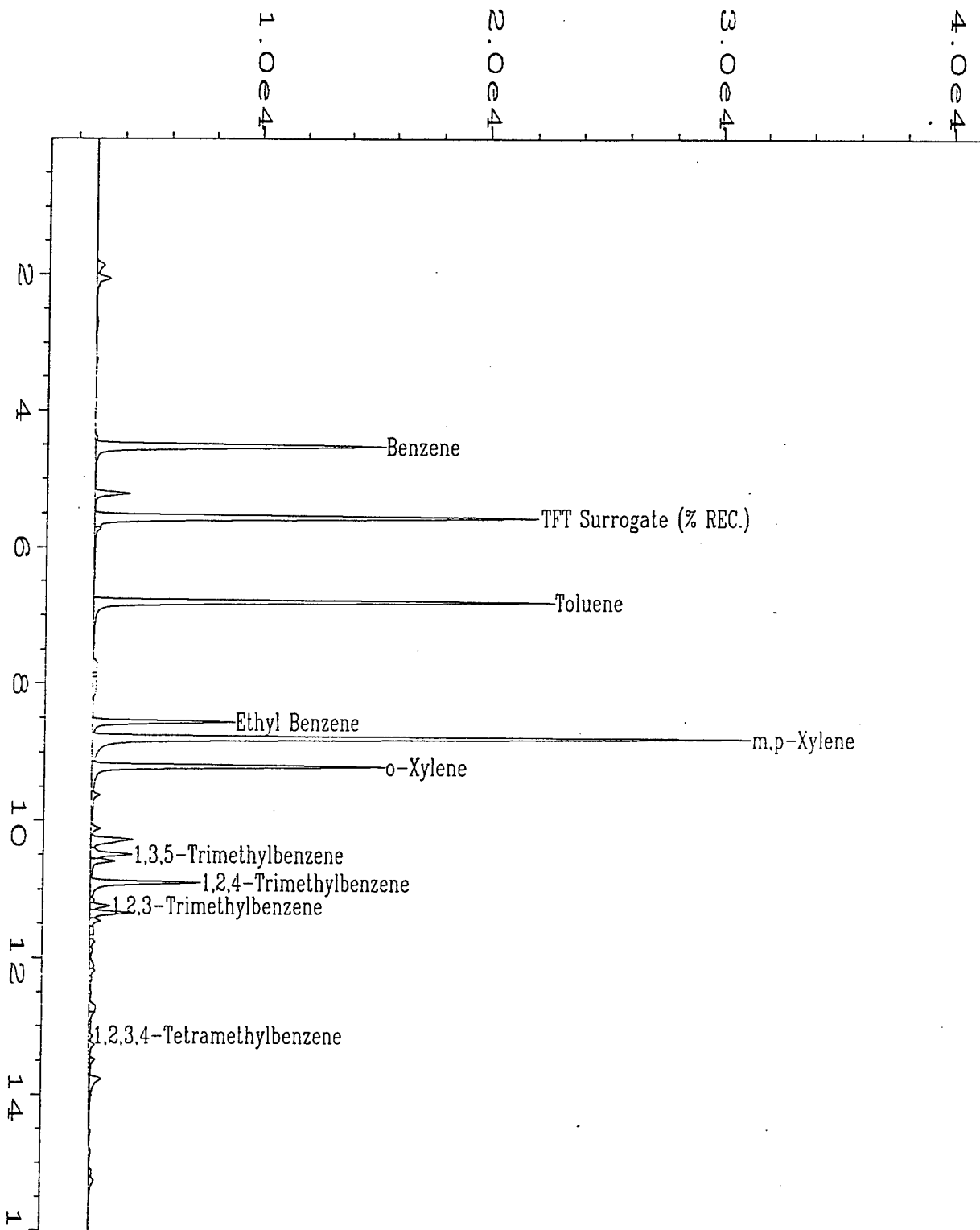
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\026R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 26
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05926;100;0.05	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20421.MTH
Acquired on	: 22 Apr 95 00:53 AM	Analysis Method	: BX20421.MTH
Report Created on:	22 Apr 95 01:09 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 100		
Sample Info	: 95-1264; MW-4; 0.050 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-4 Dupe	Client Project No.	: 722450.26020
Lab Sample Number	: X05927	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 100.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/22/95	Lab File No.	: BX2042129
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	2300	40
Toluene	108-88-3	3300	40
Chlorobenzene	108-90-7	U	40
Ethyl Benzene	100-41-4	1100	40
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	7100	40
1,3,5-Trimethylbenzene	108-67-8	210	40
1,2,4-Trimethylbenzene	95-63-6	890	40
1,2,3-Trimethylbenzene	526-73-8	370	40
1,2,3,4-Tetramethylbenzene	488-23-3	110	40
Surrogate Recovery (α,α,α -Trifluorotoluene):		93%	70%-130% (QC limits)

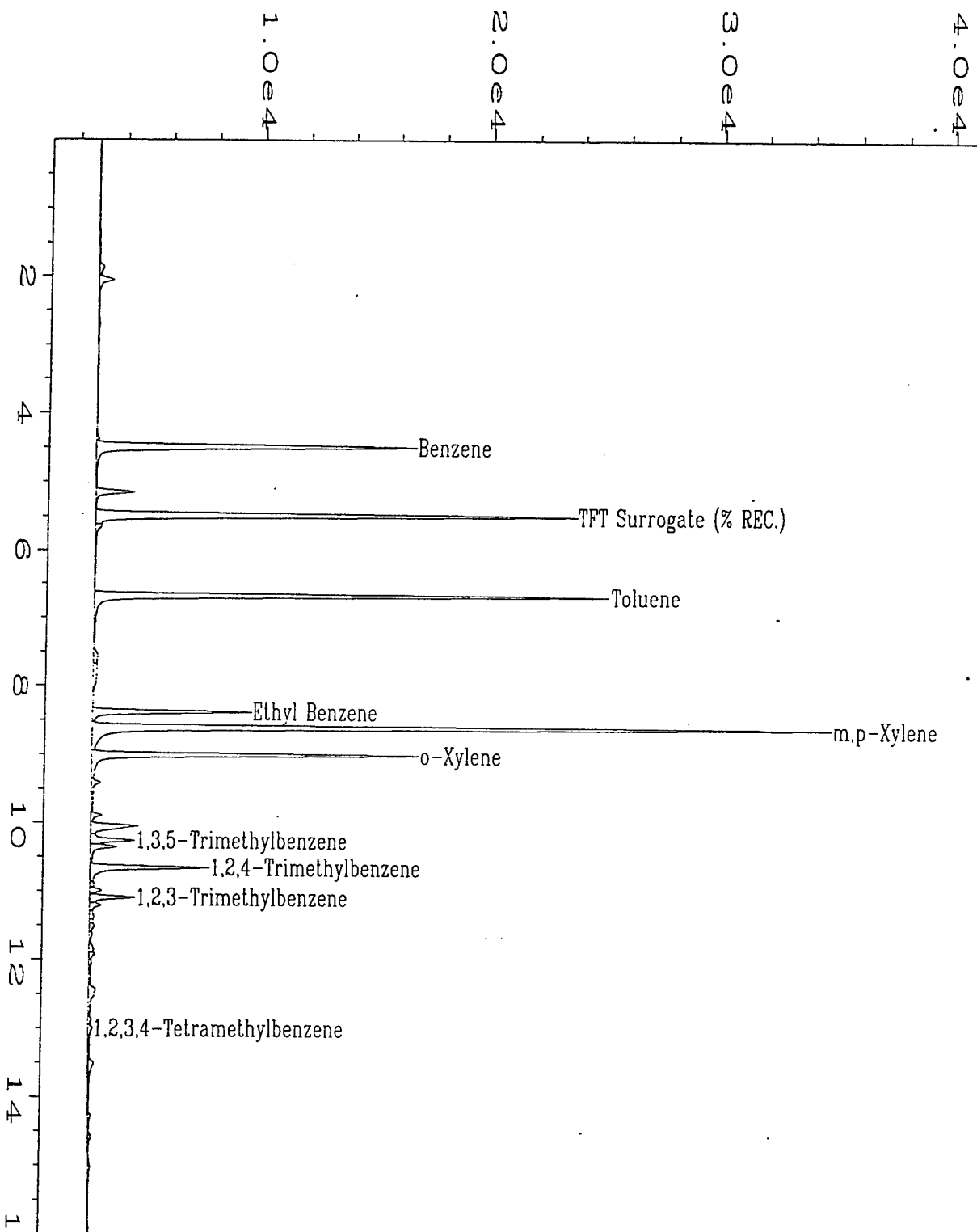
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

A. McChella
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\029R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 29
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05927;100;0.05	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.MTH
Acquired on	: 22 Apr 95 02:41 AM	Analysis Method	: BX20421.MTH
Report Created on:	22 Apr 95 02:57 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 100		
Sample Info	: 95-1264; MW-4DUP; 0.050 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-12D	Client Project No.	: 722450.26020
Lab Sample Number	: X05928	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042119
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	0.4
Toluene	108-88-3	40	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	12	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	62	0.4
1,3,5-Trimethylbenzene	108-67-8	3.2	0.4
1,2,4-Trimethylbenzene	95-63-6	13	0.4
1,2,3-Trimethylbenzene	526-73-8	4.5	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	2.6	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		100%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042512 (DF = 20).

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

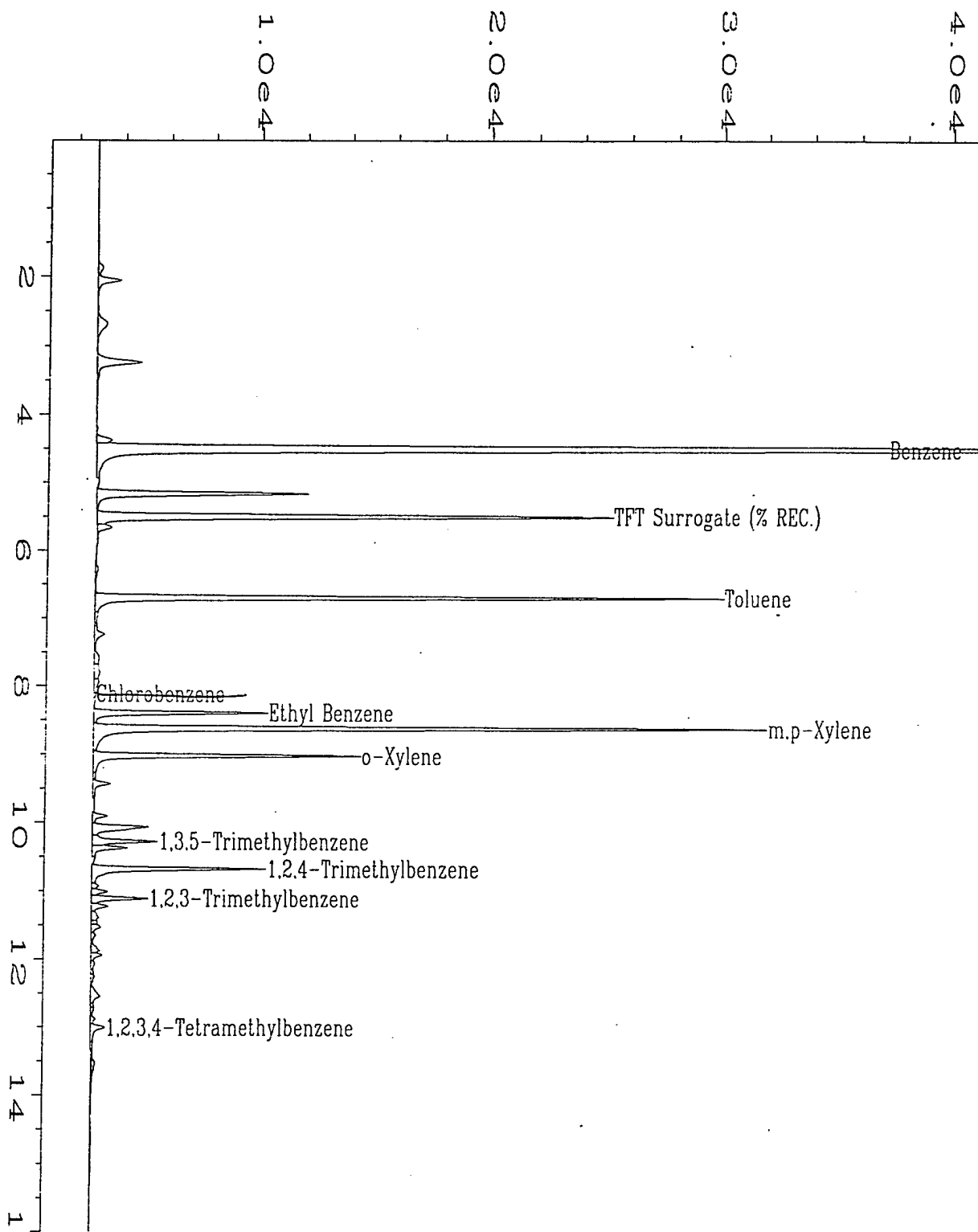
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

Am. Clall
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\019R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 19
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05928;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.MTH
Acquired on	: 21 Apr 95 08:41 PM	Analysis Method	: BX20421.MTH
Report Created on	: 21 Apr 95 08:58 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1264; MW-12D; 5 ML WATER		

pm 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number : MW-12D
Lab Sample Number : X05928
Date Sampled : 4/18/95
Date Received : 4/19/95
Date Prepared : 4/25/95
Date Analyzed : 4/25/95

Client Project No. : 722450.26020
Lab Project No. : 95-1264
Dilution Factor : 20.00
Method : 602
Matrix : Water
Lab File No. : BX2042512
Method Blank No. : MB042595

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	110	8.0
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	**	**
Surrogate Recovery (α,α,α -Trifluorotoluene):		95%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042119.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

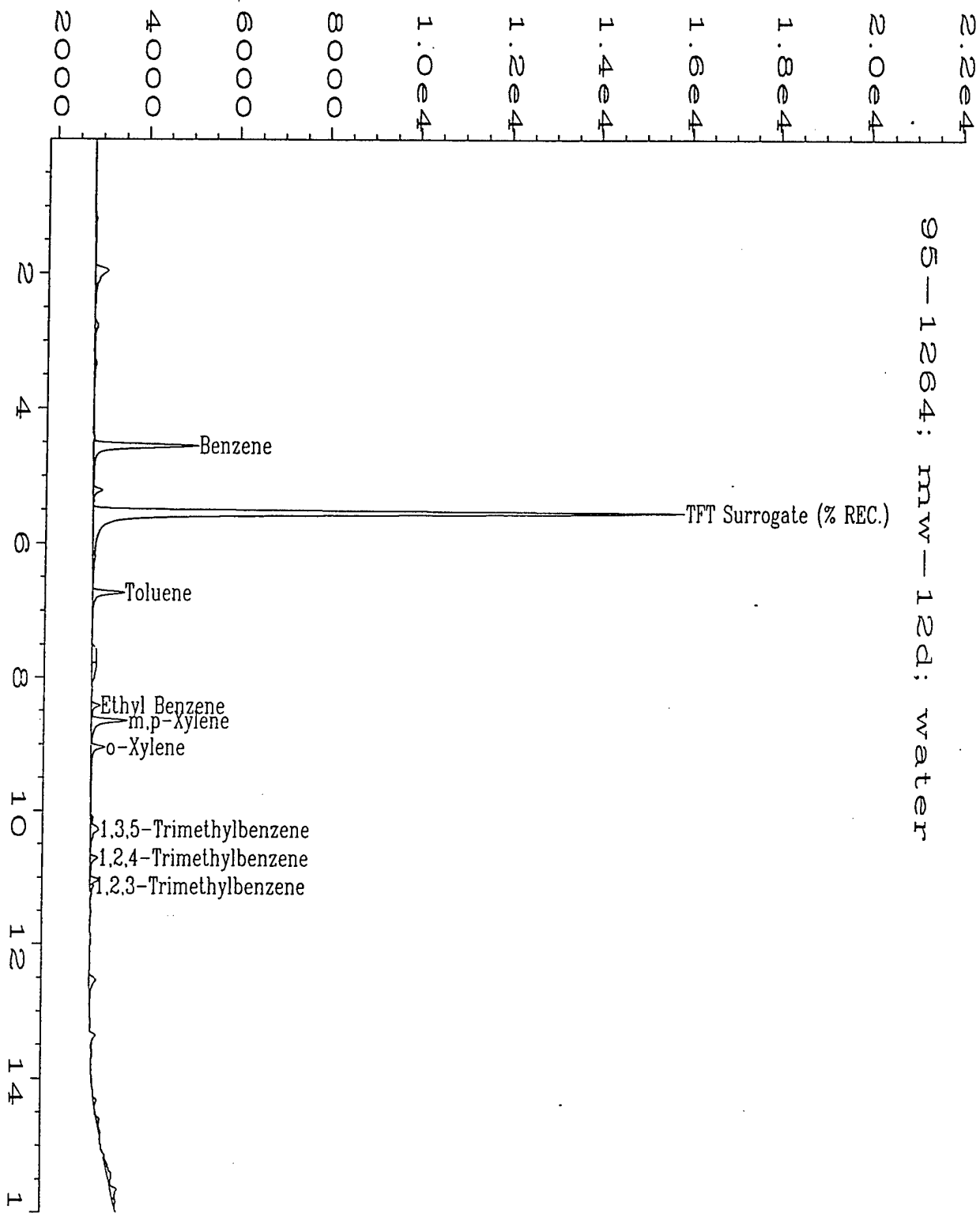
B = Compound also found in the blank.

RL = Reporting Limit.

NA = Not Available/Not Applicable.

K. Cone
Analyst

A. McCalla
Approved



Data File Name : D:\2\DATA\BX20425\012R0101.D
 Operator : S.W. Tyson
 Instrument : BTEX2
 Sample Name : x05928;20;0.25
 Run Time Bar Code:
 Required on : 25 Apr 95 03:40 PM
 Report Created on: 01 May 95 02:53 PM
 Last Recalib on : 26 APR 95 09:49 AM
 Multiplier : 1

Page Number : 1
 Vial Number : 12
 Injection Number : 1
 Sequence Line : 1
 Instrument Method: BX20425.MTH
 Analysis Method : BX20425.MTH
 Sample Amount : 0
 ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number : Trip Blank
Lab Sample Number : X05929
Date Sampled : 4/18/95
Date Received : 4/19/95
Date Prepared : 4/21/95
Date Analyzed : 4/21/95


Client Project No. : 722450.26020
Lab Project No. : 95-1264
Dilution Factor : 1.00
Method : 602
Matrix : Water
Lab File No. : BX2042115
Method Blank No. : MB042195

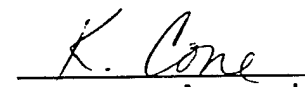
Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	U	0.4
Toluene	108-88-3	U	0.4
Chlorobenzene	108-90-7	U	0.4
Ethyl Benzene	100-41-4	U	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	U	0.4
1,3,5-Trimethylbenzene	108-67-8	U	0.4
1,2,4-Trimethylbenzene	95-63-6	U	0.4
1,2,3-Trimethylbenzene	526-73-8	U	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	U	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		91%	70%-130% (QC limits)

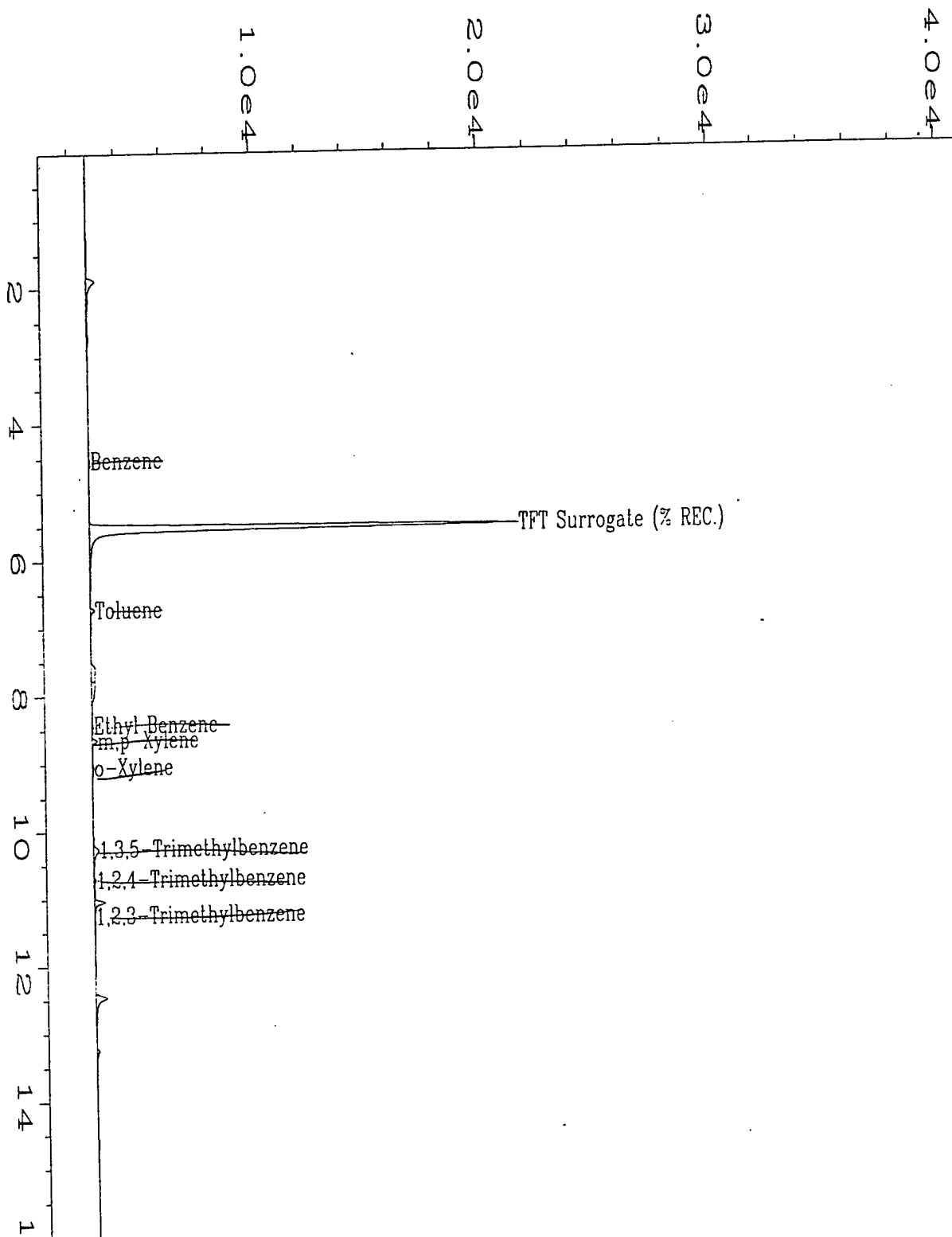
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.


Analyst


Approved



Data File Name : C:\HPCHEM\2\DATA\BX20421\015R0101.D
 Operator : T.Lockwood
 Instrument : BTEX2
 Sample Name : X05929;1;5
 Run Time Bar Code:
 Required on : 21 Apr 95 06:18 PM
 Report Created on: 21 Apr 95 06:34 PM
 Last Recalib on : 21 APR 95 02:28 PM
 Multiplier : 1
 Sample Info : 95-1264; TRIP BLANK; 5 ML WATER

Page Number : 1
 Vial Number : 15
 Injection Number : 1
 Sequence Line : 1
 Instrument Method: BX20421.MTH
 Analysis Method : BX20421.MTH
 Sample Amount : 0
 ISTD Amount :

Am 5/12/95

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-13/Free Product	Client Project No.	: 722450.2602/Seymour
Lab Sample Number	: X05930	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 125000.00
Date Received	: 4/19/95	Method	: 602/8020
Date Extracted/Prepared	: 5/3/95	Matrix	: Product
Date Analyzed	: 5/3/95	Lab File No.	: BX2050313
% Moisture	NA	Method Blank No.	: MEB2050295

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	**
Toluene	108-88-3	3500000	50000
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	7300000 B	50000
1,3,5-Trimethylbenzene	108-67-8	**	**
1,2,4-Trimethylbenzene	95-63-6	5100000	50000
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	**	**
Surrogate Recovery (α,α,α -Trifluorotoluene):		66%	50%-150% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2050216 for noted values, df = 50000, 05/02/95.

QUALIFIERS:

E = Extrapolated value.

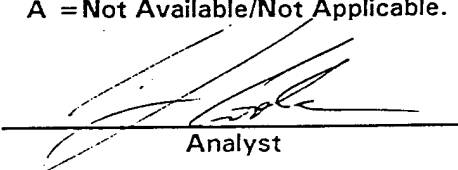
U = Compound analyzed for, but not detected.


B = Compound also found in the blank.

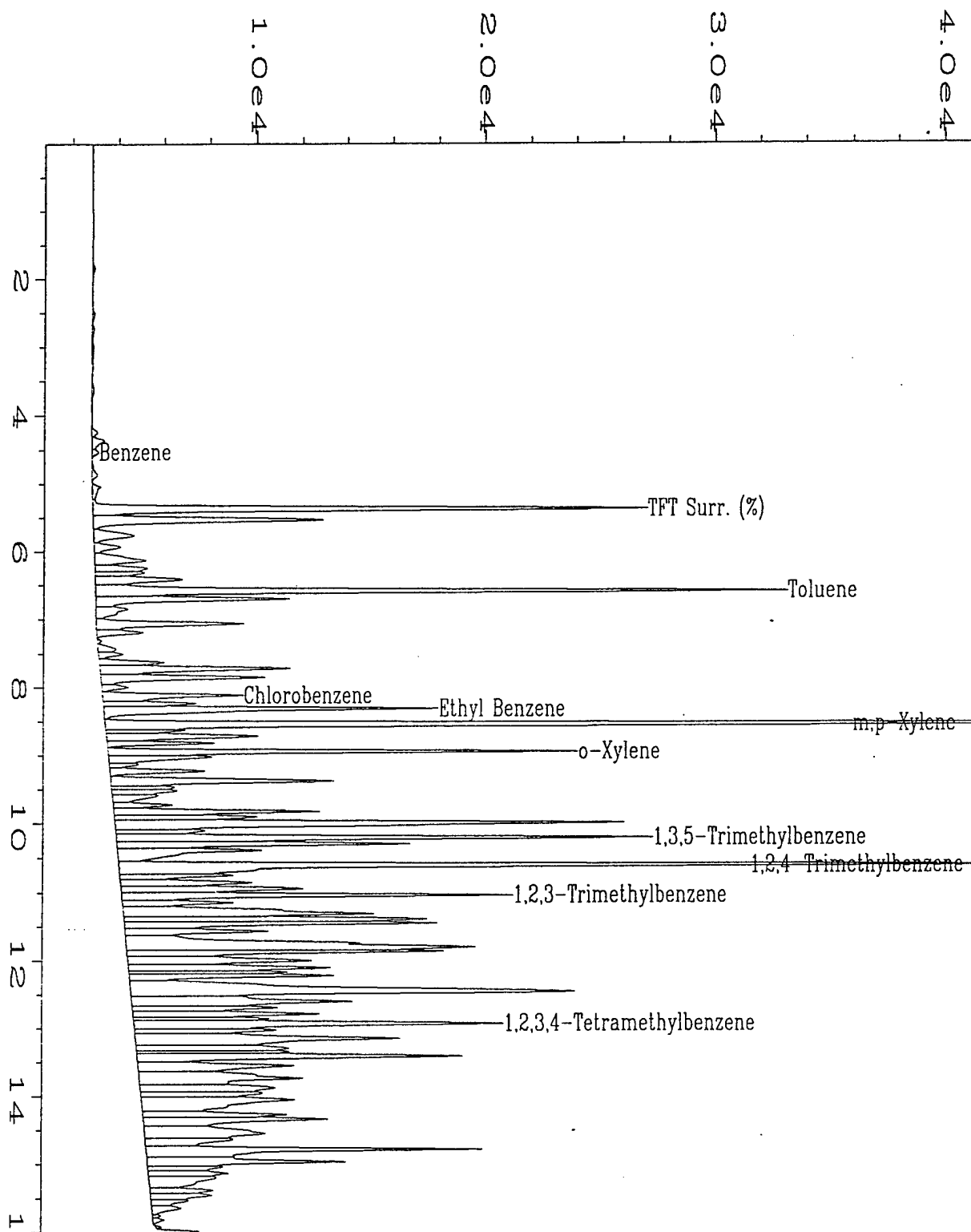
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

L = Reporting Limit.

A = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20503\013R1001.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05930;125000	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20503.MTH
Acquired on	: 03 May 95 06:21 PM	Analysis Method	: BX20503A.MTH
Report Created on:	: 04 May 95 08:56 AM	Sample Amount	: 0
Last Recalib on	: 04 MAY 95 08:47 AM	ISTD Amount	:
Multiplier	: 1.25e+005		
Sample Info	: 95-1264;MW-13;100ul»10mlMeOH/4ul»5mlWater		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-80201

Method 8020 Data Report

Client Sample Number	: MW-13/Free Product	Client Project No.	: 722450.2602/Seymo
Lab Sample Number	: X05930	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 50000.00
Date Received	: 4/19/95	Method	: 602/8020
Date Extracted/Prepared	: 5/2/95	Matrix	: Product
Date Analyzed	: 5/2/95	Lab File No.	: BX2050216
% Moisture	NA	Method Blank No.	: MEB2050295

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	1000000	20000
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	780000	20000
Ethyl Benzene	100-41-4	2300000	20000
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
,3,5-Trimethylbenzene	108-67-8	2300000	20000
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	2600000	20000
1,2,3,4-Tetramethylbenzene	488-23-3	3600000	20000
Surrogate Recovery (α,α,α -Trifluorotoluene):		106%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2050313 for noted values, df = 125000, 05/03/95.

QUALIFIERS:

E = Extrapolated value.

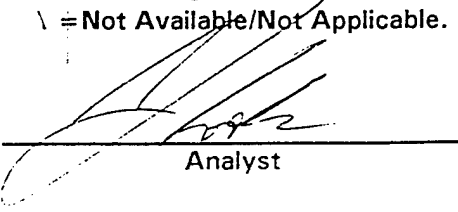
U = Compound analyzed for, but not detected.

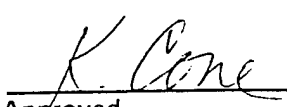
B = Compound also found in the blank.

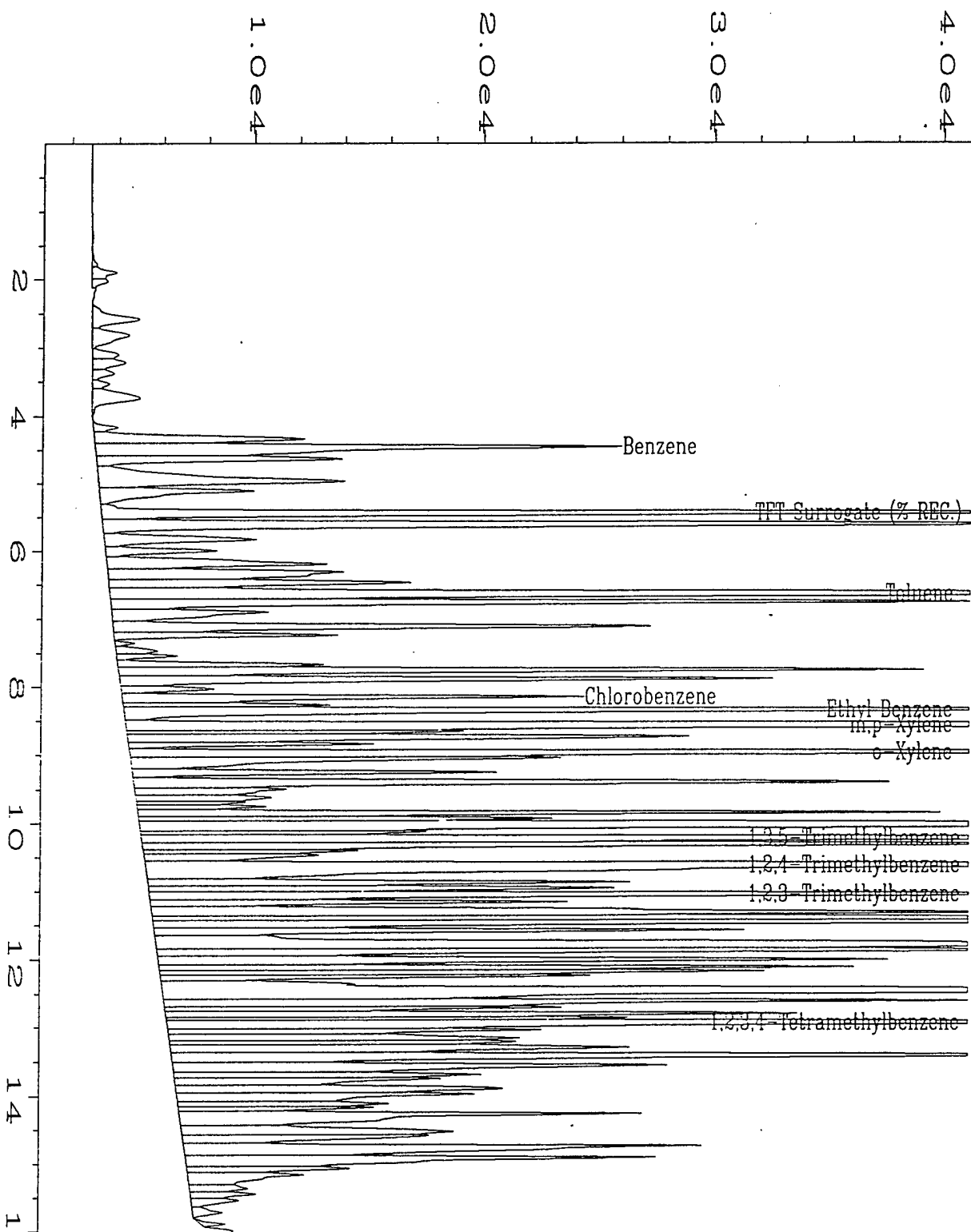
J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

RL = Reporting Limit.

\ = Not Available/Not Applicable.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20502\016R1001.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 16
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05930;50000	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20502.MTH
Acquired on	: 02 May 95 07:36 PM	Analysis Method	: BX20502A.MTH
Report Created on	: 03 May 95 02:57 PM	Sample Amount	: 0
Last Recalib on	: 03 MAY 95 02:37 PM	ISTD Amount	:
Multiplier	: 5e+004		
Sample Info	: 95-1264;MW-13;100ul»10mlMeOH/10ul»5mlWater		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-5(+ BTEX MS/MSD)	Client Project No.	: 722450.26020
Lab Sample Number	: X05931	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 12.50
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/24/95	Matrix	: Water
Date Analyzed	: 4/25/95	Lab File No.	: BX2042411
		Method Blank No.	: MB042495

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	240	B	5.0
Toluene	108-88-3	**		**
Chlorobenzene	108-90-7	**		**
Ethyl Benzene	100-41-4	**		**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	95	B	5.0
1,3,5-Trimethylbenzene	108-67-8	**		**
1,2,4-Trimethylbenzene	95-63-6	20		5.0
1,2,3-Trimethylbenzene	526-73-8	**		**
1,2,3,4-Tetramethylbenzene	488-23-3	**		**
Surrogate Recovery (α,α,α -Trifluorotoluene):		88%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042122.

QUALIFIERS:

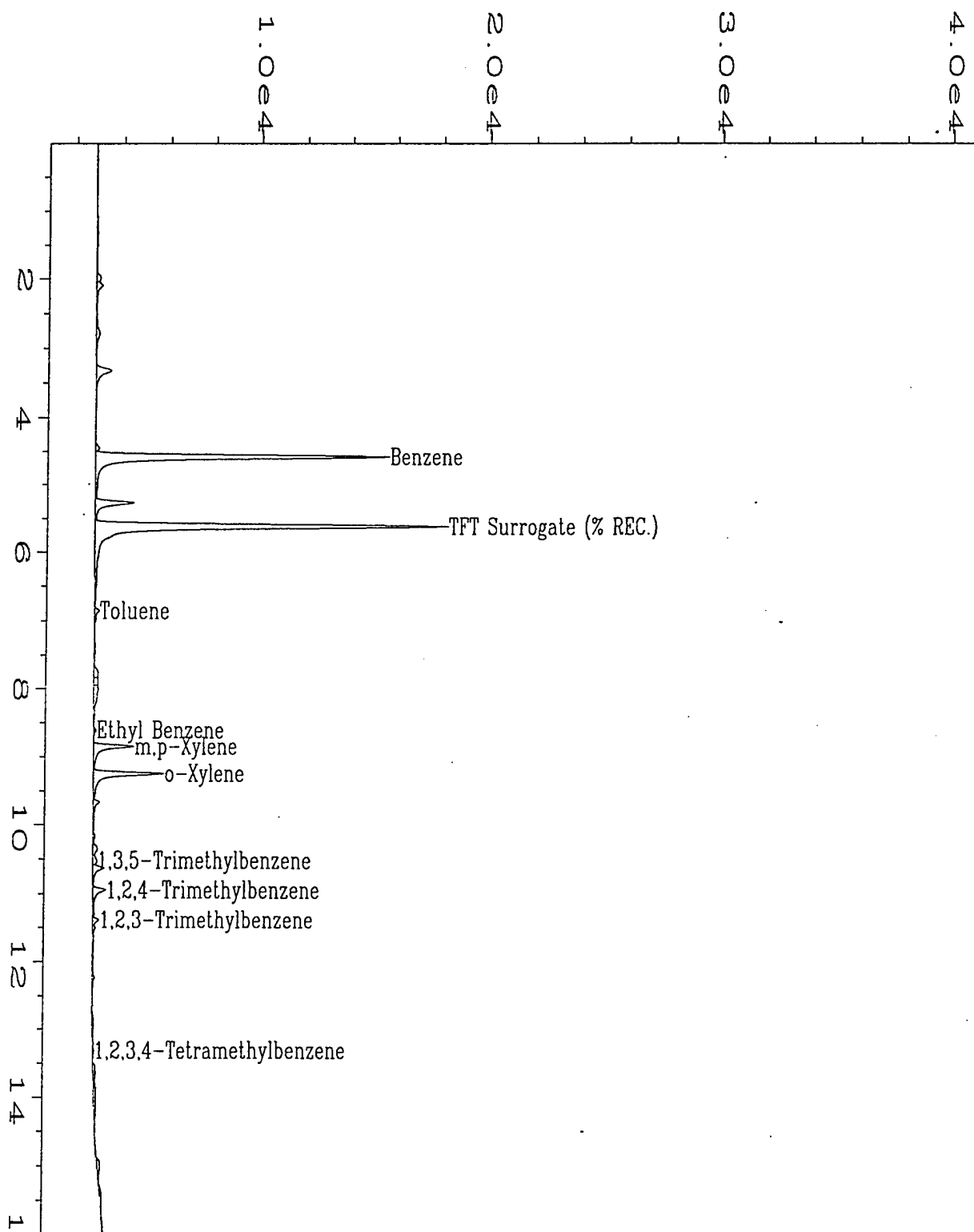
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone

Analyst

P. McClellan

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20424\011R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 11
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05931;12.5;0.4	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20424.MTH
Printed on	: 25 Apr 95 02:24 AM	Analysis Method	: BX20424.MTH
Report Created on:	25 Apr 95 11:13 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 10:43 AM	ISTD Amount	:
Multiplier	: 12.5		
Sample Info	: Project#: 95-1264	Client#:	MW-5(+BTEX MS/MSD) WATER

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-5(+BTEX MS/MSD)	Client Project No.	: 722450.26020
Lab Sample Number	: X05931	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042122
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	**
Toluene	108-88-3	4.6	0.4
Chlorobenzene	108-90-7	1.4	0.4
Ethyl Benzene	100-41-4	4.0	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	2.2	0.4
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	37	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	18	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		104%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042411 (DF=12.5).

QUALIFIERS:

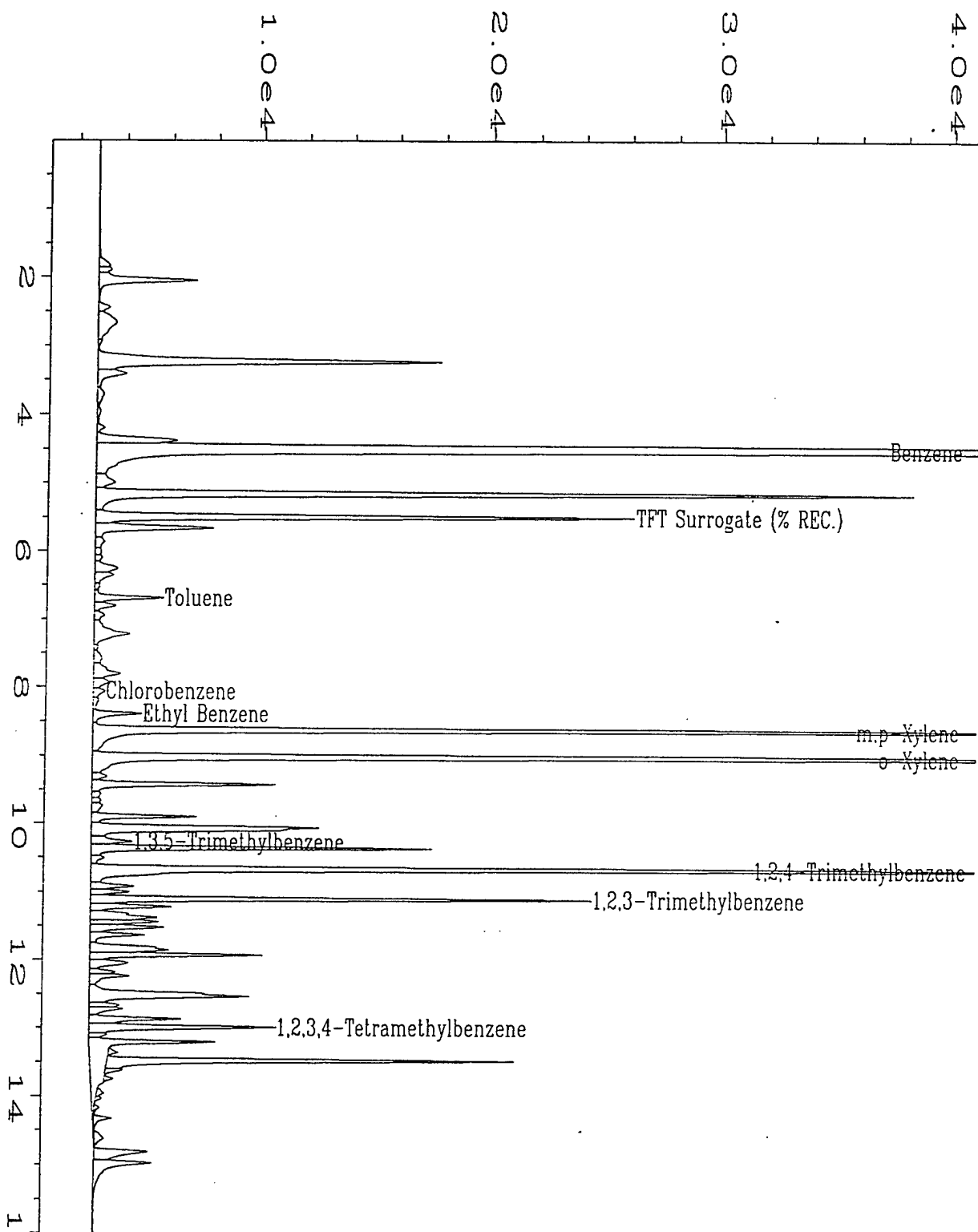
E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone

Analyst

A. McClellan

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\022R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 22
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05931;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.MTH
Acquired on	: 21 Apr 95 10:29 PM	Analysis Method	: BX20421.MTH
Report Created on	: 21 Apr 95 10:46 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1264; MW-12D; 5 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-5(+BTEX MS/MSD)	Client Project No.	: 722450.26020
Lab Sample Number	: X05931Dup	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 12.50
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/24/95	Matrix	: Water
Date Analyzed	: 4/25/95	Lab File No.	: BX2042412
		Method Blank No.	: MB042495

Compound Name	Cas Number	Sample Concentration ug/L		RL ug/L
Benzene	71-43-2	240	B	5.0
Toluene	108-88-3	**		**
Chlorobenzene	108-90-7	**		**
Ethyl Benzene	100-41-4	**		**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	98	B	5.0
1,3,5-Trimethylbenzene	108-67-8	**		**
1,2,4-Trimethylbenzene	95-63-6	22		5.0
1,2,3-Trimethylbenzene	526-73-8	**		**
1,2,3,4-Tetramethylbenzene	488-23-3	**		**
Surrogate Recovery (α,α,α -Trifluorotoluene):		91%		70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042123.

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

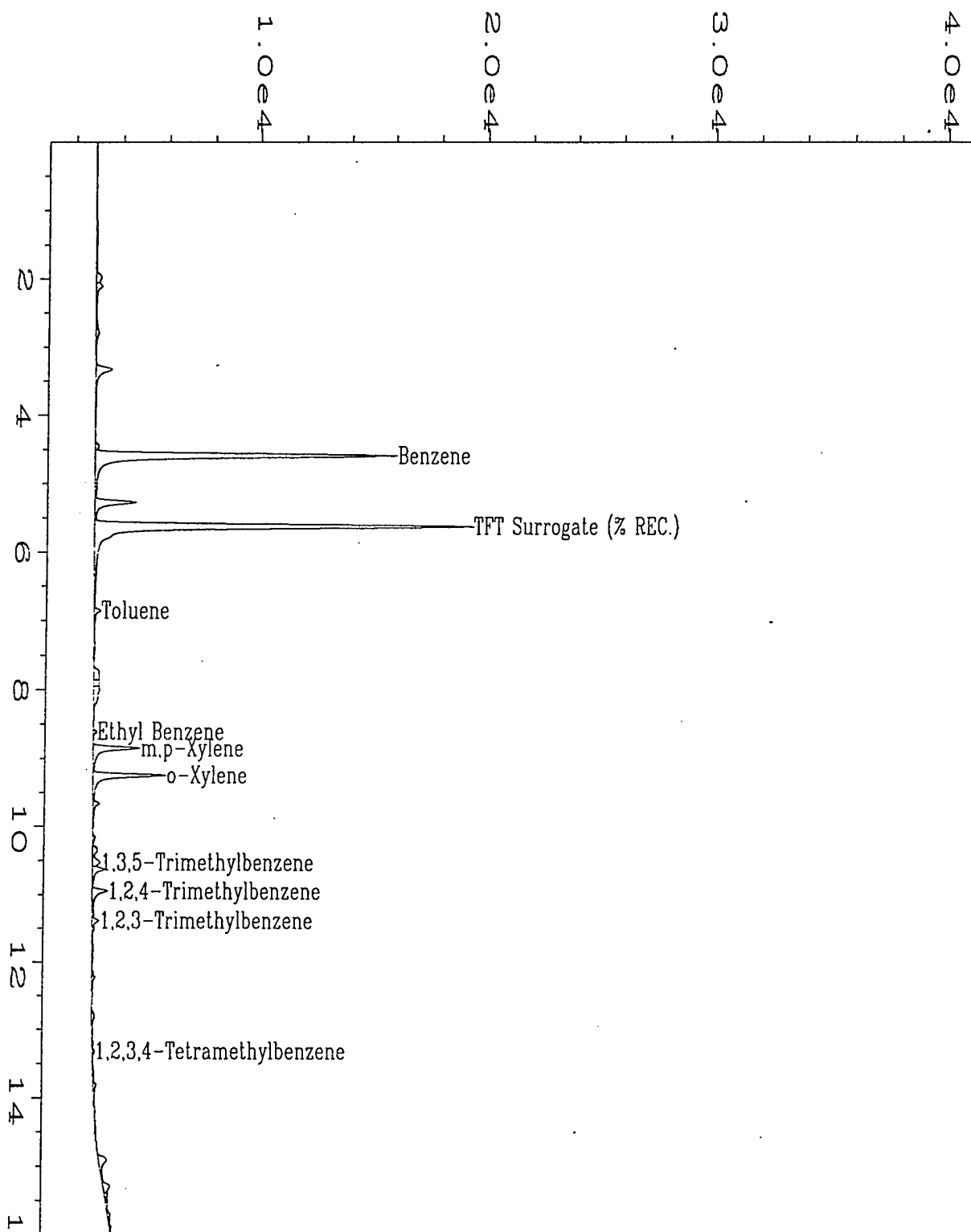
NA = Not Available/Not Applicable.

K. Cone

Analyst

A. McCallister

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20424\012R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 12
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05931DUP12.5;.4	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: BX20424.MTH
Required on	: 25 Apr 95 03:03 AM	Analysis Method	: BX20424.MTH
Report Created on:	: 25 Apr 95 11:13 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 10:43 AM	ISTD Amount	:
Multiplier	: 12.5		
Sample Info	: Project#: 95-1264	Client#:	MW-5(+BTEX MS/MSD) WATER

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-5 (+ BTEX MS/MSD)	Client Project No.	: 722450.26020
Lab Sample Number	: X05931Dup	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 1.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/21/95	Lab File No.	: BX2042123
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	**
Toluene	108-88-3	4.0	0.4
Chlorobenzene	108-90-7	1.2	0.4
Ethyl Benzene	100-41-4	3.6	0.4
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	1.9	0.4
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	34	0.4
1,2,3,4-Tetramethylbenzene	488-23-3	16	0.4
Surrogate Recovery (α,α,α -Trifluorotoluene):		99%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

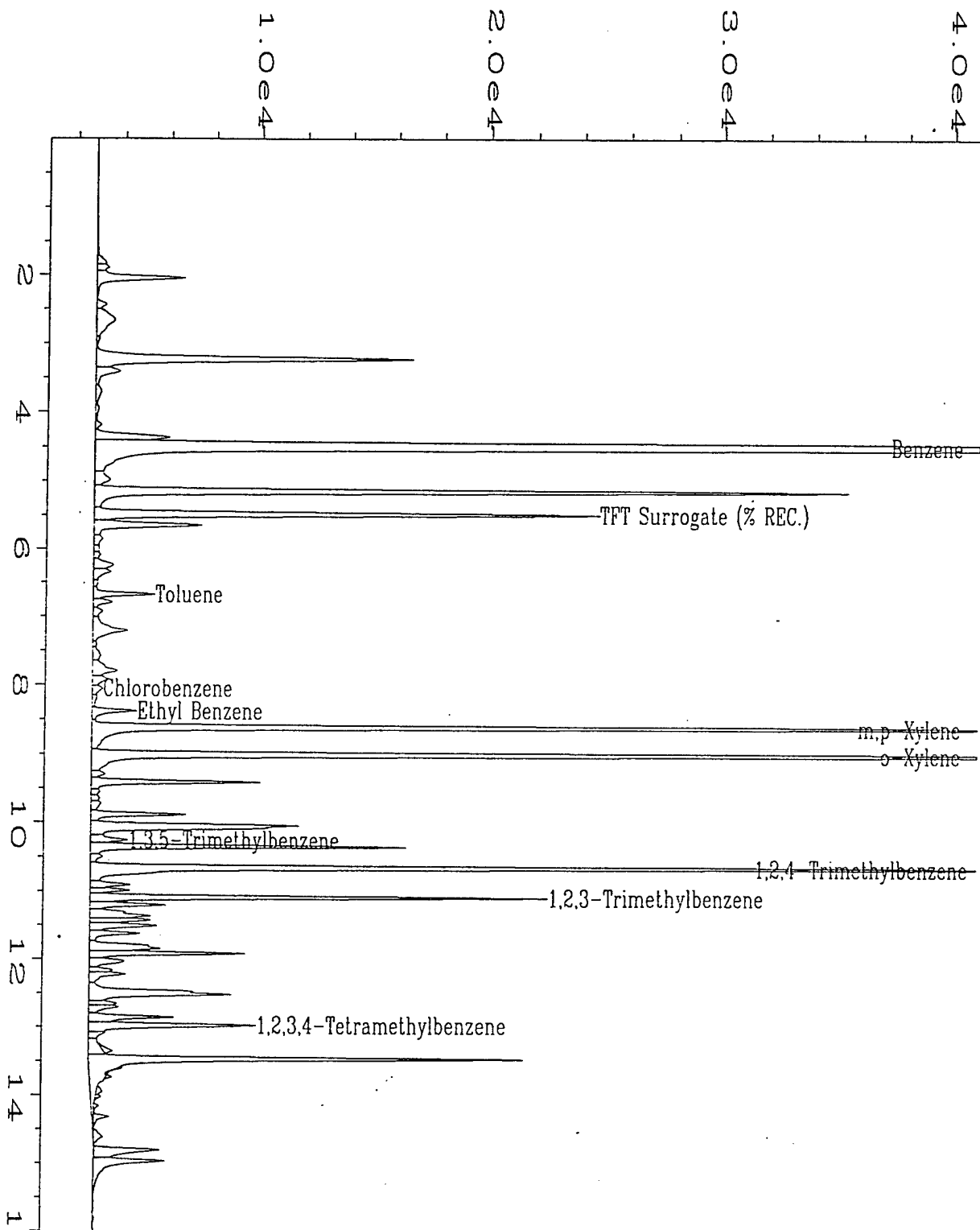
** = See BX2042412 (DF = 12.5).

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

AmCleb
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\023R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 23
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05931DUP;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.MTH
Acquired on	: 21 Apr 95 11:05 PM	Analysis Method	: BX20421.MTH
Report Created on:	: 21 Apr 95 11:21 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1264; MW-12D; 5 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-8	Client Project No.	: 722450.26020
Lab Sample Number	: X05932	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 100.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/22/95	Lab File No.	: BX2042130
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	410	40
Toluene	108-88-3	120	40
Chlorobenzene	108-90-7	U	40
Ethyl Benzene	100-41-4	260	40
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	540	40
1,3,5-Trimethylbenzene	108-67-8	63	40
1,2,4-Trimethylbenzene	95-63-6	170	40
1,2,3-Trimethylbenzene	526-73-8	70	40
1,2,3,4-Tetramethylbenzene	488-23-3	100	40
Surrogate Recovery (α,α,α -Trifluorotoluene):		88%	70%-130% (QC limits)

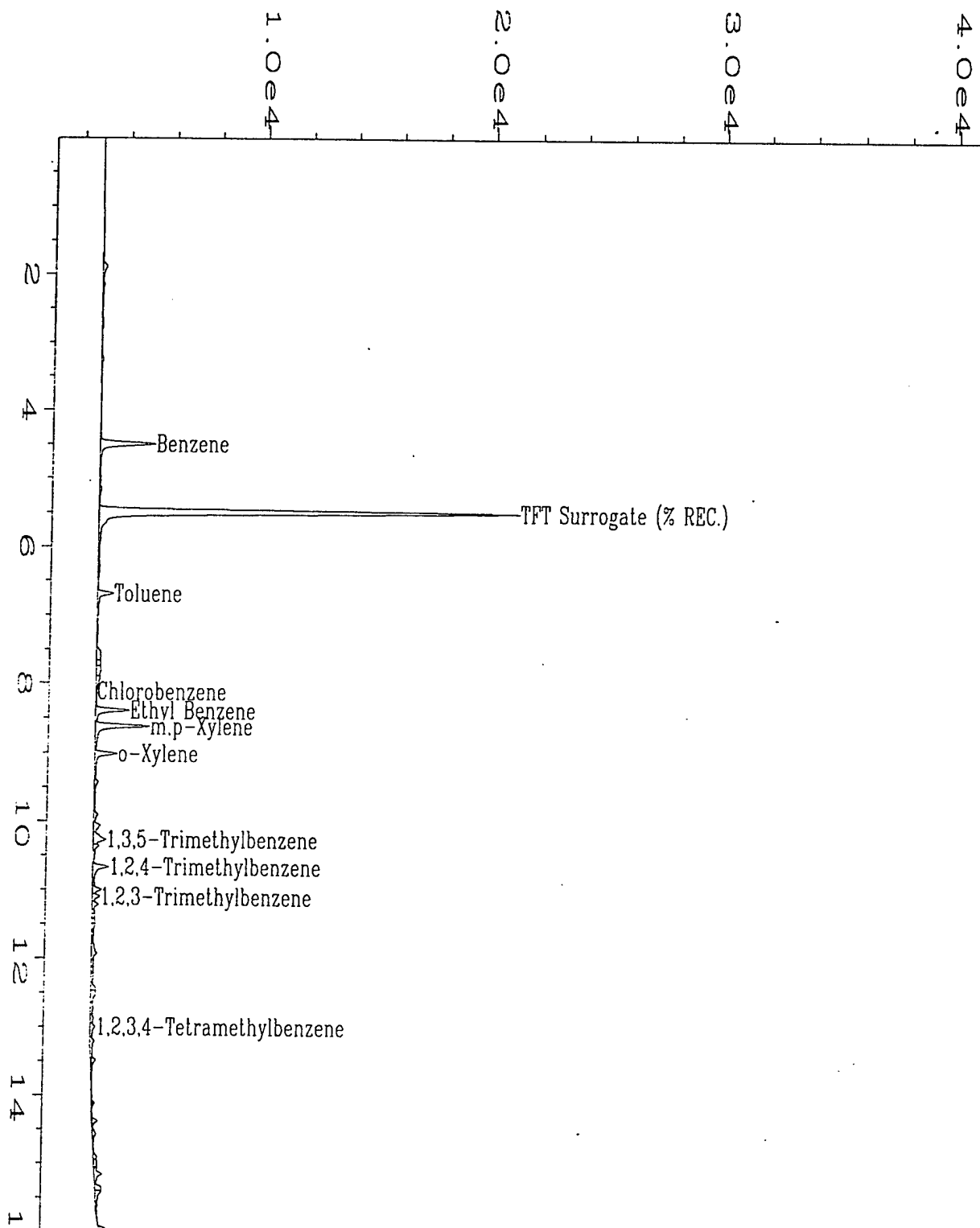
Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

AmCelle
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\030R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 30
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05932;100;0.05	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	BX20421.MTH
Acquired on	: 22 Apr 95 03:17 AM	Analysis Method	: BX20421.MTH
Report Created on:	22 Apr 95 03:33 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 100		
Sample Info	: 95-1264; MW-8; 0.050 ML WATER		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-3	Client Project No.	: 722450.26020
Lab Sample Number	: X05933	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 10.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/24/95	Matrix	: Water
Date Analyzed	: 4/25/95	Lab File No.	: BX2042417
		Method Blank No.	: MB042495

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	280 B	4.0
Toluene	108-88-3	18	4.0
Chlorobenzene	108-90-7	U	4.0
Ethyl Benzene	100-41-4	140	4.0
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	170 B	4.0
1,3,5-Trimethylbenzene	108-67-8	4.5	4.0
1,2,4-Trimethylbenzene	95-63-6	58	4.0
1,2,3-Trimethylbenzene	526-73-8	13	4.0
1,2,3,4-Tetramethylbenzene	488-23-3	**	**
Surrogate Recovery (α,α,α -Trifluorotoluene):		77%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

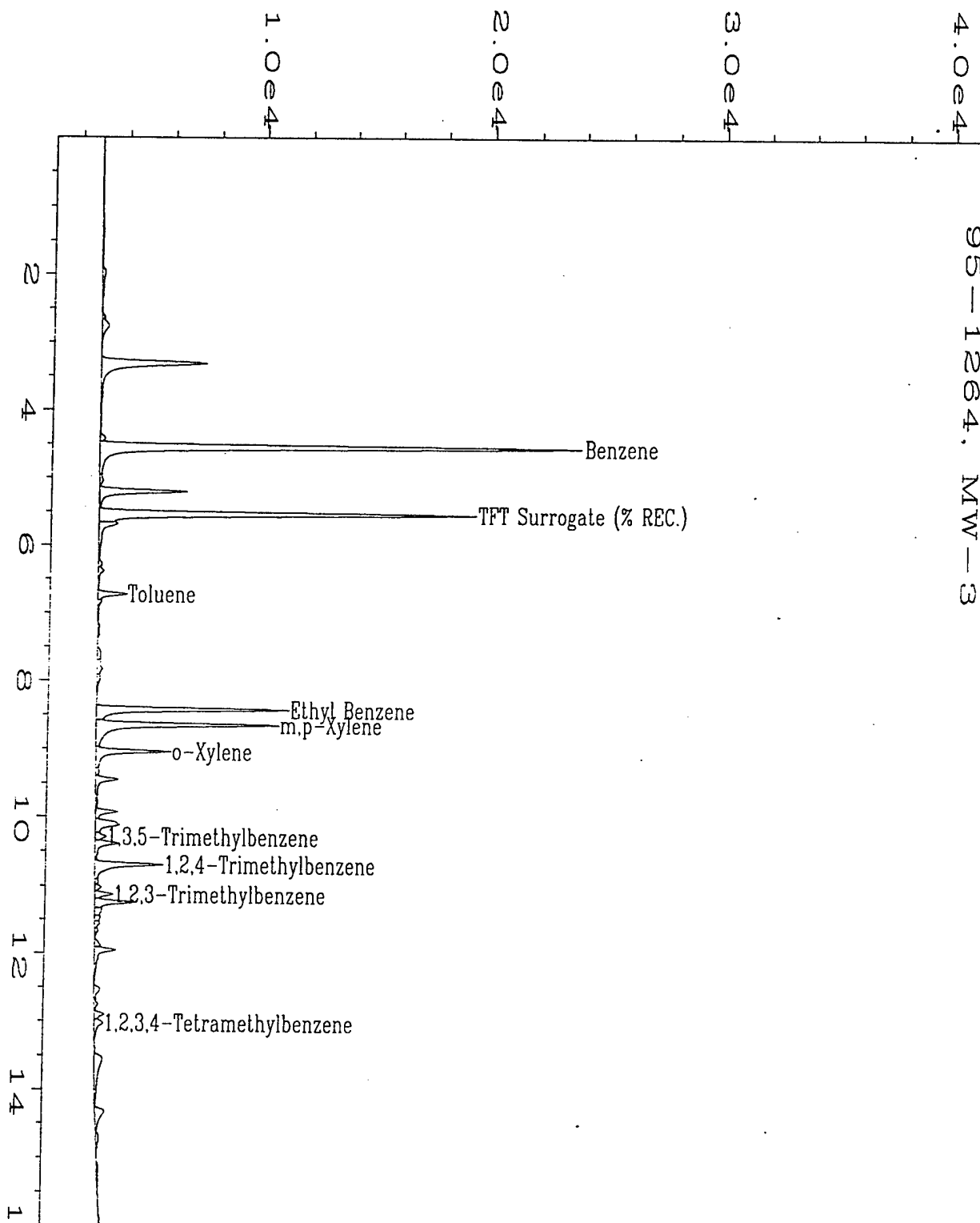
** = See BX2042131 (DF=100).

QUALIFIERS:

E = Extrapolated value.
U = Compound analyzed for, but not detected.
B = Compound also found in the blank.
RL = Reporting Limit.
NA = Not Available/Not Applicable.

K. Cone
Analyst

Amclella
Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20424\017R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 17
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05933;10;0.5	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20424.MTH
Acquired on	: 25 Apr 95 06:17 AM	Analysis Method	: BX20424.MTH
Report Created on:	25 Apr 95 12:39 PM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 10:43 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Method 602 Data Report

Client Sample Number	: MW-3	Client Project No.	: 722450.26020
Lab Sample Number	: X05933	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	Dilution Factor	: 100.00
Date Received	: 4/19/95	Method	: 602
Date Prepared	: 4/21/95	Matrix	: Water
Date Analyzed	: 4/22/95	Lab File No.	: BX2042131
		Method Blank No.	: MB042195

Compound Name	Cas Number	Sample Concentration ug/L	RL ug/L
Benzene	71-43-2	**	**
Toluene	108-88-3	**	**
Chlorobenzene	108-90-7	**	**
Ethyl Benzene	100-41-4	**	**
Total Xylenes (m, p & o)	108-38-3, 106-42-3 and 95-47-6	**	**
1,3,5-Trimethylbenzene	108-67-8	**	**
1,2,4-Trimethylbenzene	95-63-6	**	**
1,2,3-Trimethylbenzene	526-73-8	**	**
1,2,3,4-Tetramethylbenzene	488-23-3	66	40
Surrogate Recovery (α,α,α -Trifluorotoluene):		88%	70%-130% (QC limits)

Note: Total Xylenes consist of three isomers, two of which co-elute.
The Xylene RL is for a single peak.

** = See BX2042417 (DF = 10).

QUALIFIERS:

E = Extrapolated value.

U = Compound analyzed for, but not detected.

B = Compound also found in the blank.

RL = Reporting Limit.

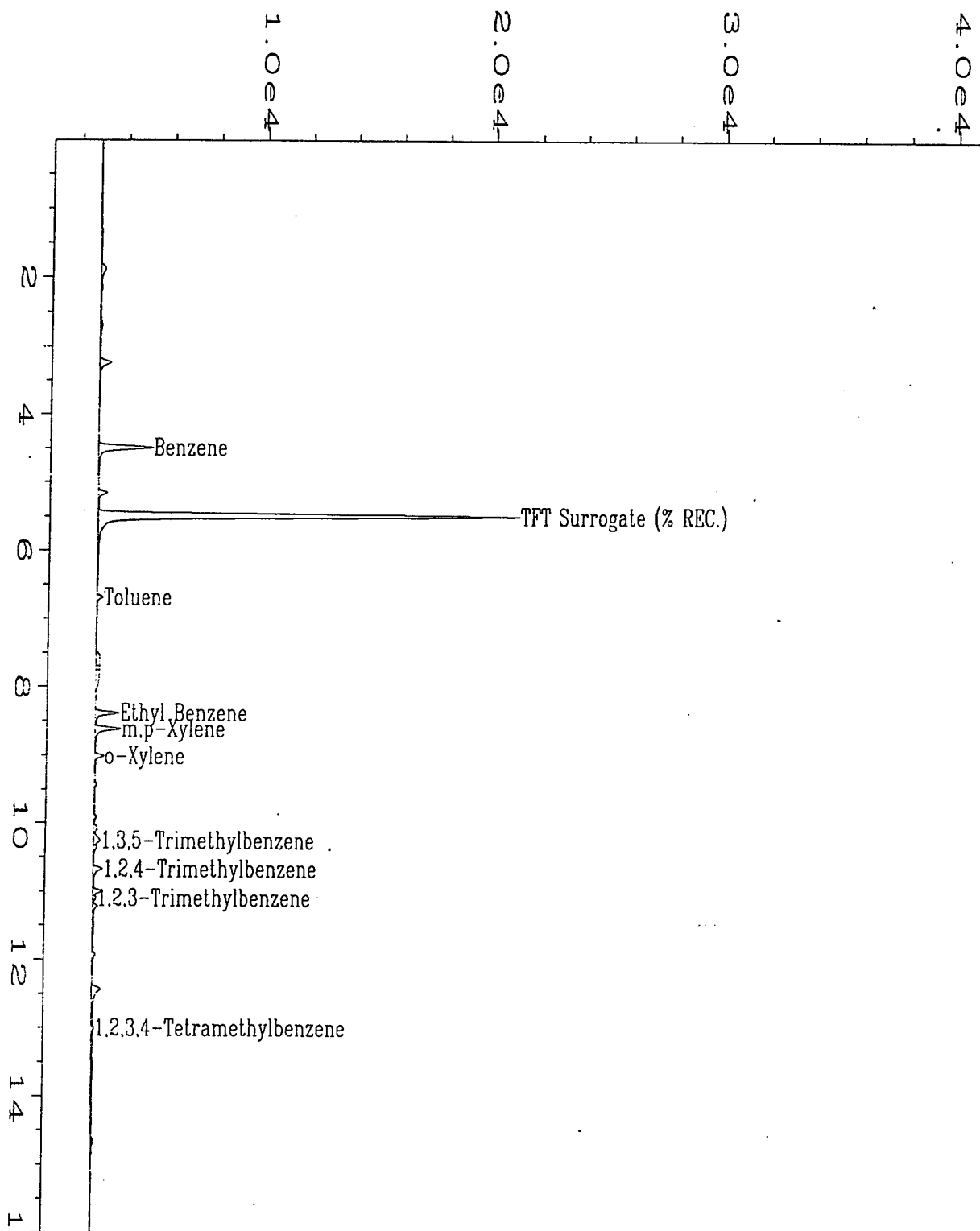
NA = Not Available/Not Applicable.

K. Cone

Analyst

AmCelle

Approved



Data File Name	: C:\HPCHEM\2\DATA\BX20421\031R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 31
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05933;100;0.05	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.MTH
Acquired on	: 22 Apr 95 03:53 AM	Analysis Method	: BX20421.MTH
Report Created on	: 22 Apr 95 04:09 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 100		
Sample Info	: 95-1264; MW-3; 0.050 ML WATER		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-5	Client Project No.	: 722450.2602
Lab Sample No.	: X05931	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	EPA Method No.	: 602
Date Received	: 4/18/95	Matrix	: WATER
Date Prepared	: 4/21/95	Lab File Number(s)	: BX20421024,025
Date Analyzed	: 4/21/95	Method Blank	: MB2042195
		Dilution Factor	: 1

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	20.0	**	**	**	50-150
Toluene	20.0	4.6	22.8	91.0	50-148
Ethyl Benzene	20.0	4.0	23.0	95.0	50-150
m,p-Xylene	40.0	75.0	109.3	85.8	50-150
o-Xylene	20.0	112.1 E **	127.2 E	75.5	50-150
Chlorobenzene	20.0	1.4	21.1	98.5	55-135
1,3,5-TMB	20.0	2.2	21.0	94.0	50-150
1,2,4-TMB	20.0	76.9 E **	93.6 E	83.5	50-150
1,2,3-TMB	20.0	36.8	55.0	91.0	50-150
1,2,3,4-TeMB	20.0	17.5	37.3	99.0	50-150

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Benzene	20.0	**	**	**	25	50-150
Toluene	20.0	22.1	87.5	3.9	25	50-148
Ethyl Benzene	20.0	22.3	91.5	3.8	25	50-150
m,p-Xylene	40.0	105.3	75.8	12.4	25	50-150
o-Xylene	20.0	123.1 E **	55.0	30.6 *	25	50-150
Chlorobenzene	20.0	22.8	107.0	8.3	25	55-135
1,3,5-TMB	20.0	20.6	92.0	2.2	25	50-150
1,2,4-TMB	20.0	91.1 E **	71.0	16.2	25	50-150
1,2,3-TMB	20.0	54.4	88.0	3.4	25	50-150
1,2,3,4-TeMB	20.0	38.4	104.5	5.4	25	50-150

* = Values outside of QC limits.

RPD: 1 out of (9) outside limits.
Spike Recovery: 0 out of (18) outside limits.

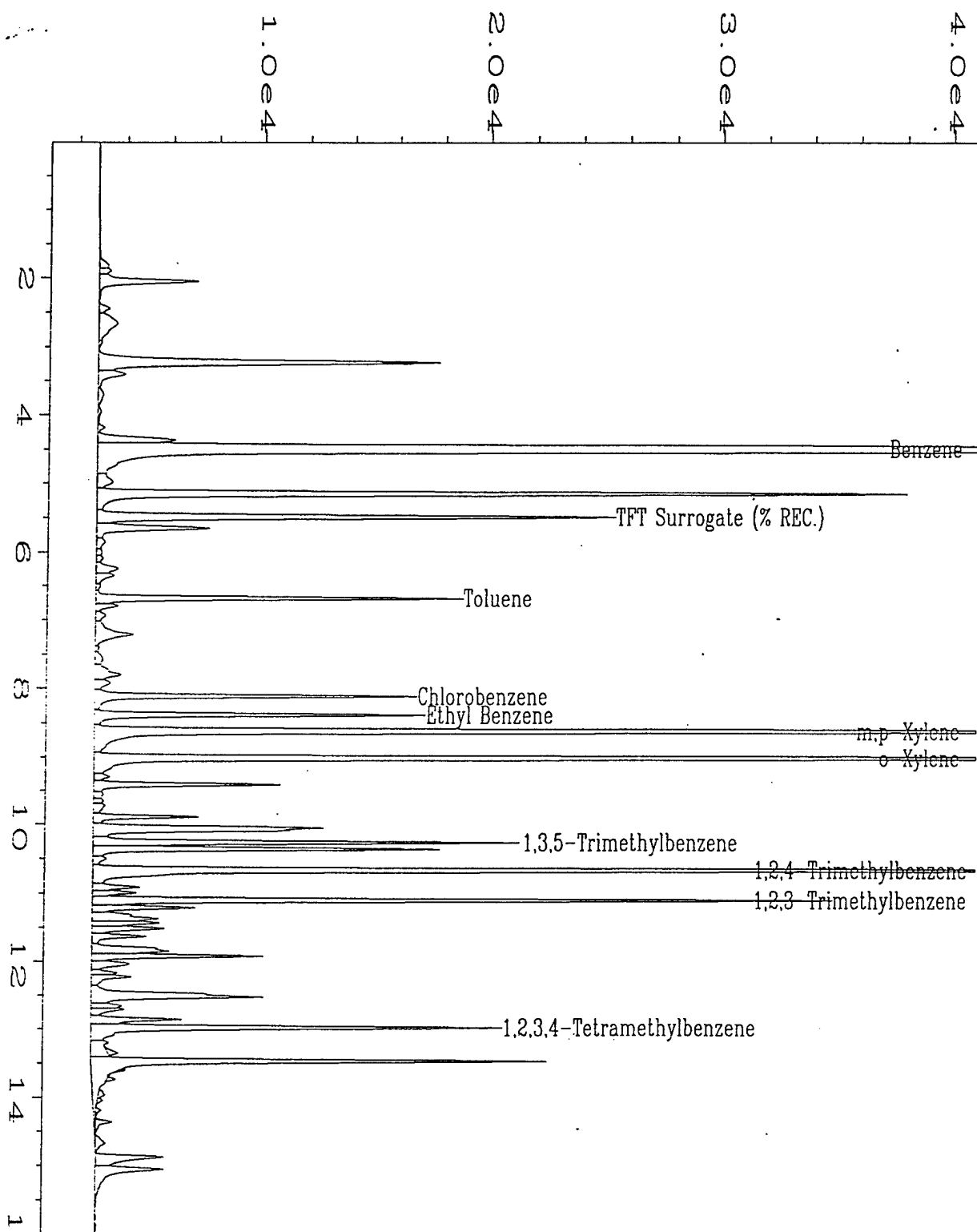
Comments: E = The benzene, o-xylene, and 1,2,4-Trimethylbenzene results are off-scale.
The o-xylene RPD is out for this set of MS/MSD probably due to the off-scaling. ** See DF-12.5 for these compounds.

Analyst

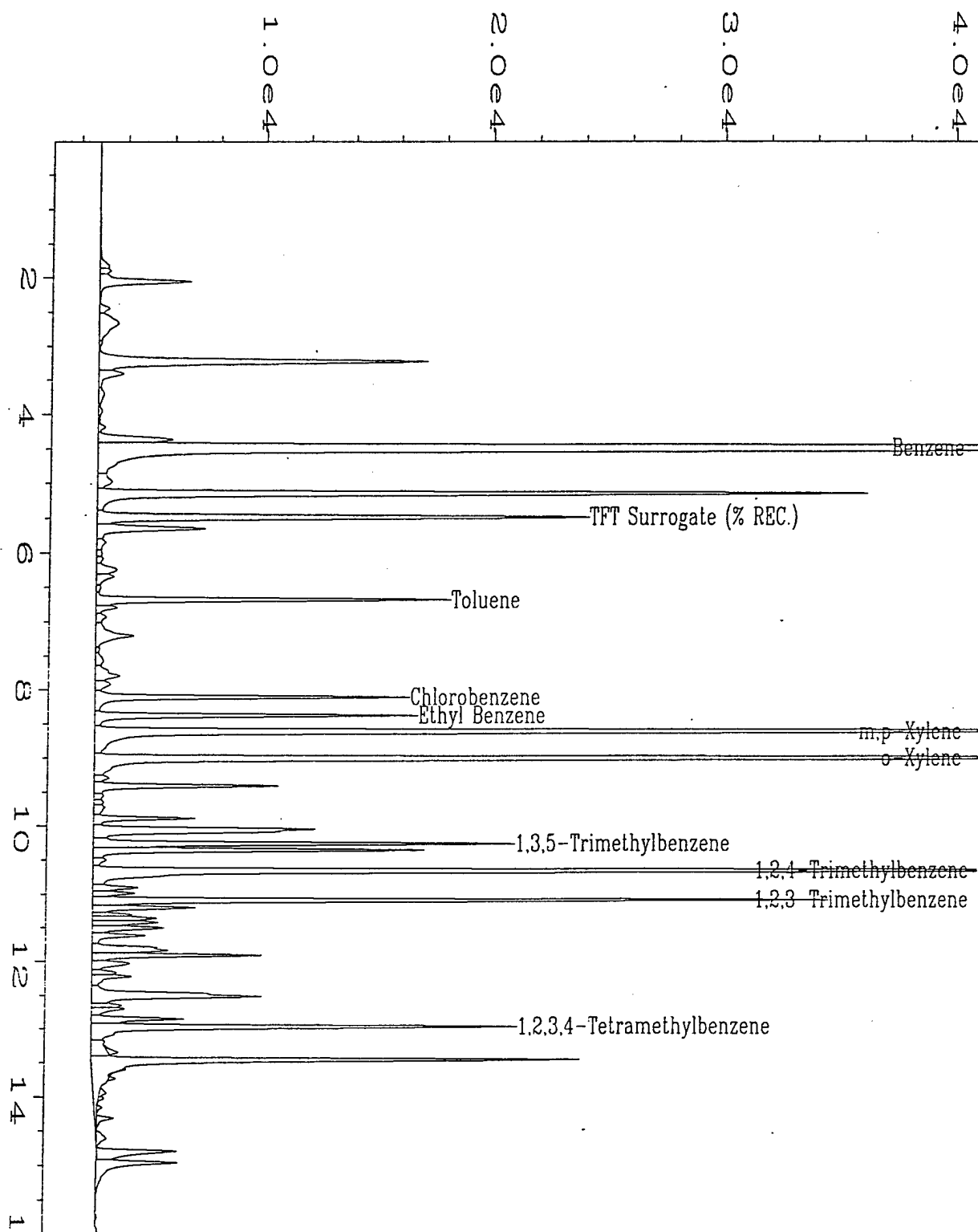
K. Cone

Approved

MS91264B.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20421\024R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 24
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05931MS;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.MTH
Acquired on	: 21 Apr 95 11:41 PM	Analysis Method	: BX20421.MTH
Report Created on	: 21 Apr 95 11:57 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1264; MW-12D; 5 ML WATER; 20 PPB SPIKE		



Data File Name	: C:\HPCHEM\2\DATA\BX20421\025R0101.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 25
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05931MSD;1;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: BX20421.M
Acquired on	: 22 Apr 95 00:17 AM	Analysis Method	: BX20421.M
Report Created on:	: 22 Apr 95 00:33 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 02:28 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: 95-1264; MW-12D; 5 ML WATER; 20 PPB SPIKE		

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

BTEX Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-5	Client Project No.	: 722450.2602
Lab Sample No.	: X05931	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	EPA Method No.	: 602
Date Received	: 4/18/95	Matrix	: WATER
Date Prepared	: 4/24/95	Lab File Number(s)	: BX20424013,014
Date Analyzed	: 4/25/95	Method Blank	: MB2042495
		Dilution Factor	: 12.5

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS %REC	QC Limits %REC
Benzene	250.0	239.2	398.3	63.6	50-150
Toluene	250.0	6.0	193.7	75.1	50-148
Ethyl Benzene	250.0	0.0	194.2	77.7	50-150
m,p-Xylene	500.0	39.5	409.8	74.1	50-150
o-Xylene	250.0	55.4	218.6	65.3	50-150
Chlorobenzene	250.0	0.0	190.8	65.3	55-135
1,3,5-TMB	NA	NA	NA	NA	50-150
1,2,4-TMB	250.0	19.7	191.2	68.6	50-150
1,2,3-TMB	NA	NA	NA	NA	50-150
1,2,3,4-TeMB	NA	NA	NA	NA	50-150

Compound	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Benzene	250.0	398.1	63.6	0.1	25	50-150
Toluene	250.0	192.6	74.6	0.6	25	50-148
Ethyl Benzene	250.0	191.0	76.4	1.7	25	50-150
m,p-Xylene	500.0	386.6	69.4	6.5	25	50-150
o-Xylene	250.0	244.8	75.8	14.9	25	50-150
Chlorobenzene	250.0	186.1	74.4	2.5	25	55-135
1,3,5-TMB	NA	NA	NA	NA	25	50-150
1,2,4-TMB	250.0	155.2	54.2	23.5	25	50-150
1,2,3-TMB	NA	NA	NA	NA	25	50-150
1,2,3,4-TeMB	NA	NA	NA	NA	25	50-150

* = Values outside of QC limits.

RPD: 0 out of (7) outside limits.

Spike Recovery: 0 out of (14) outside limits.

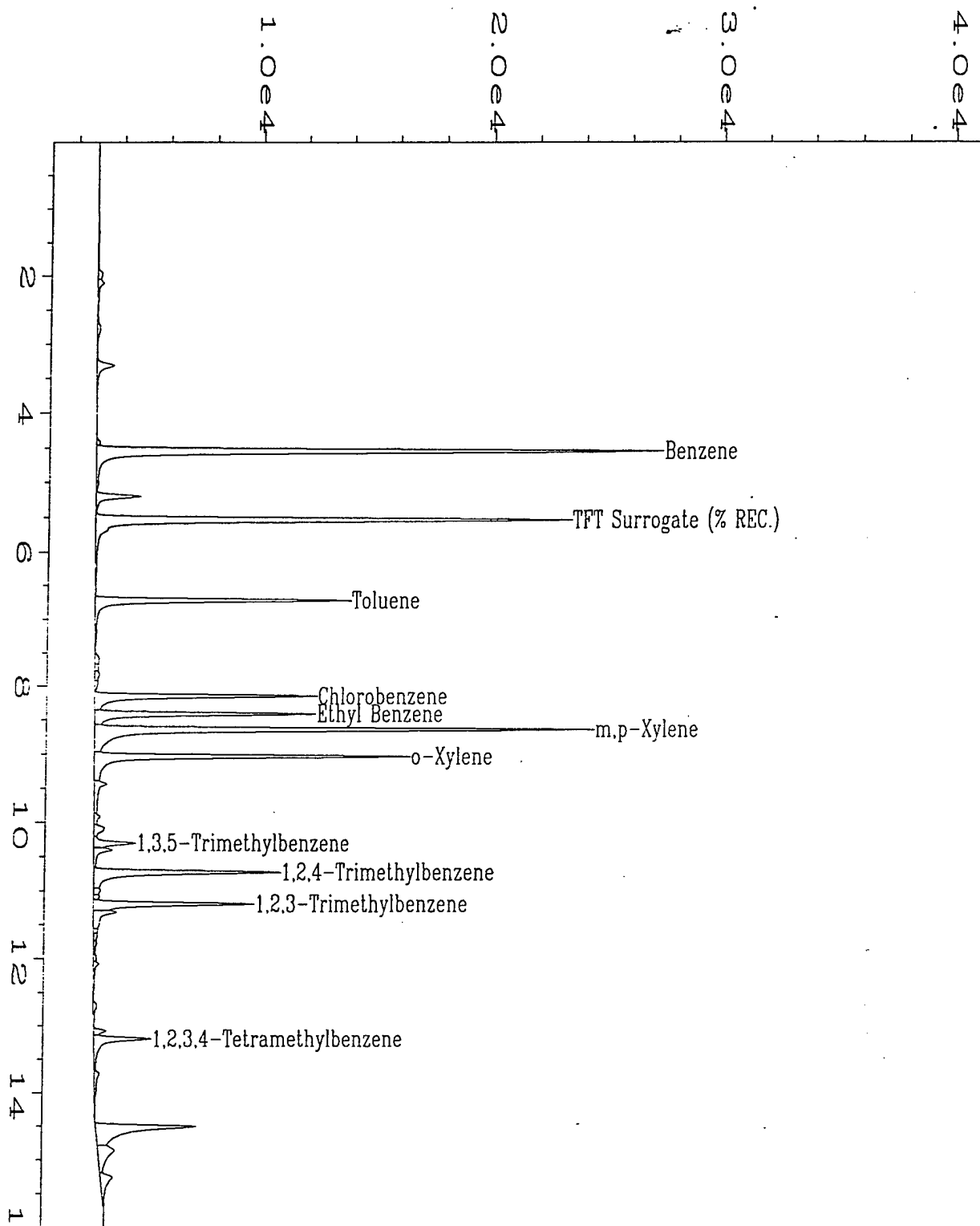
Comments:

Analyst

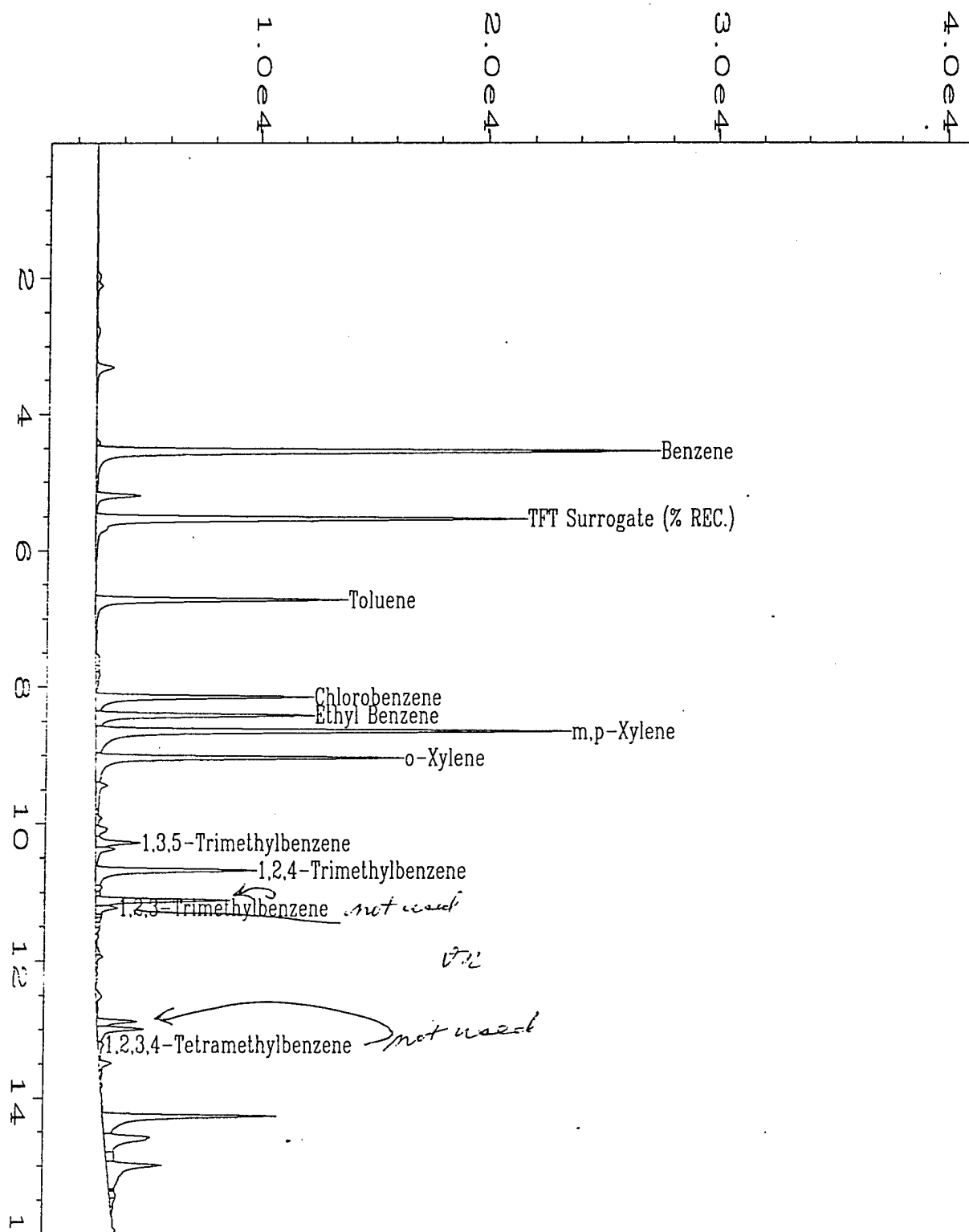
K. Cone

Approved

MS951264.XLS



Data File Name	: C:\HPCHEM\2\DATA\BX20424\013R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 13
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05931MS;12.5;.4	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20424.METHOD
Acquired on	: 25 Apr 95 03:42 AM	Analysis Method	: BX20424.METHOD
Report Created on:	25 Apr 95 11:14 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 10:43 AM	ISTD Amount	:
Multiplier	: 12.5	Client#:	MW-5(+BTEX MS/MSD) WATER
Sample Info	: Project#: 95-1264		
	20ppb STD REF #1656		



Data File Name	: C:\HPCHEM\2\DATA\BX20424\014R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 14
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: X05931MSD12.5;.4	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20424.MTH
Acquired on	: 25 Apr 95 04:21 AM	Analysis Method	: BX20424.MTH
Report Created on:	25 Apr 95 11:14 AM	Sample Amount	: 0
Last Recalib on	: 25 APR 95 10:43 AM	ISTD Amount	:
Multiplier	: 12.5	Client#:	MW-5(+BTEX MS/MSD) WATER
Sample Info	: Project#: 95-1264		
	20ppb STD REF #1656		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042195	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/21/95	Method	: 602
Date Analyzed	: 4/21/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX20421009

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.9	89.5	71.0-119.0*
Toluene	108-88-3	18.3	91.5	73.0-111.0*
Chlorobenzene	108-90-7	18.8	94.0	64.0-119.0*
Ethyl Benzene	100-41-4	18.7	93.5	75.0-114.0*
m,p-Xylene	108-38-3	19.6	98.0	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	18.8	94.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	19.6	98.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.7	93.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.5	92.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		100%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

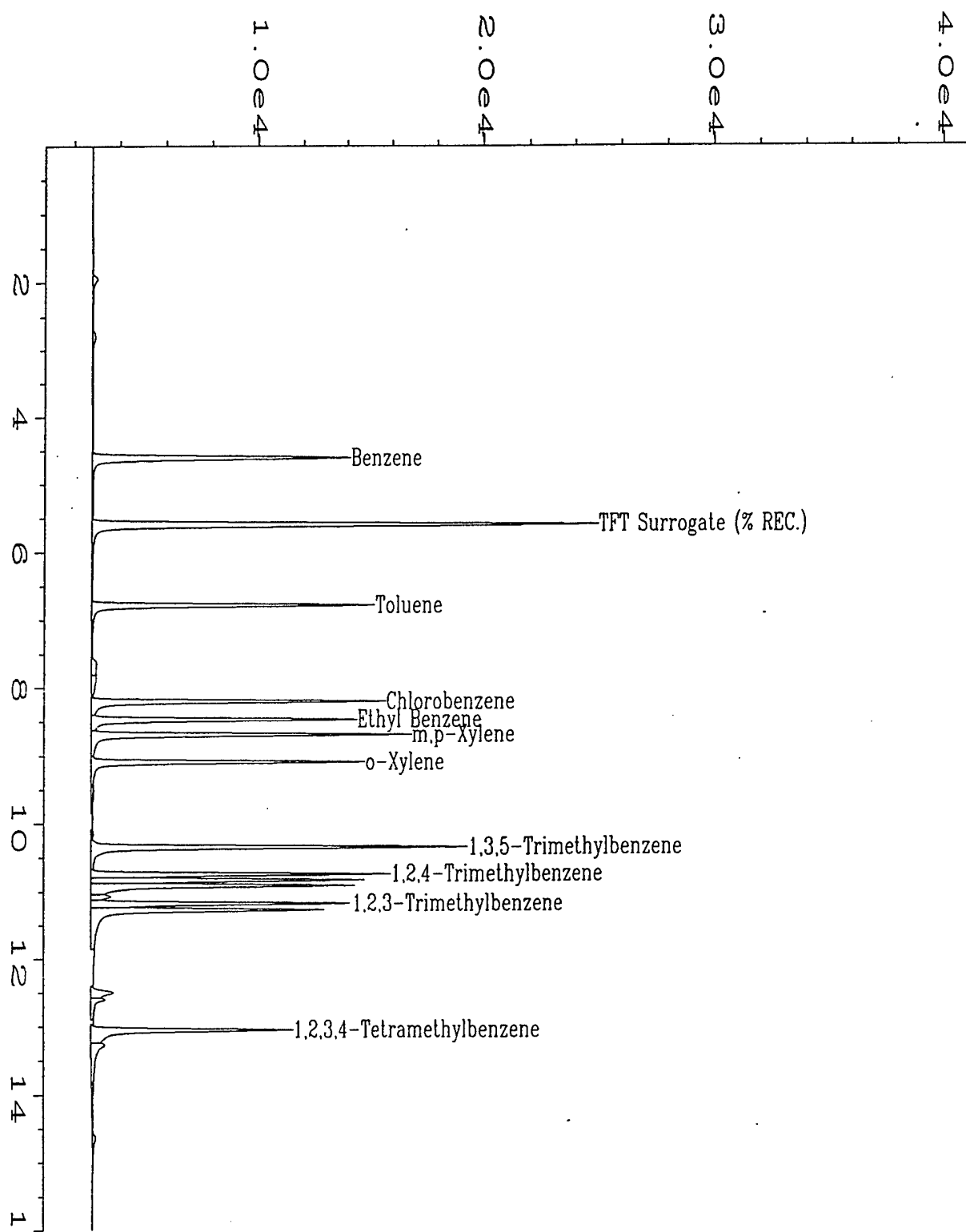
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

P. McCall
Approved



Data File Name : D:\2\DATA\BX20421\009R0101.D
 Operator : T.Lockwood
 Instrument : BTEX2
 Sample Name : LCS042195
 Run Time Bar Code:
 Started on : 21 Apr 95 02:25 PM
 Report Created on: 01 May 95 03:27 PM
 Last Recalib on : 21 APR 95 02:28 PM
 Multiplier : 1

Page Number : 1
 Vial Number : 9
 Injection Number : 1
 Sequence Line : 1
 Instrument Method: BX20421.MTH
 Analysis Method : BX20421.MTH
 Sample Amount : 0
 ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042495	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/24/95	Method	: 602
Date Analyzed	: 4/25/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX20424009

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	14.5	72.5	71.0-119.0*
Toluene	108-88-3	15.4	77.0	73.0-111.0*
Chlorobenzene	108-90-7	15.9	79.5	64.0-119.0*
Ethyl Benzene	100-41-4	16.0	80.0	75.0-114.0*
m,p-Xylene	108-38-3	17.2	86.0	75.0-114.0*
o-Xylene	106-42-3 95-47-6	13.6	68.0	64.0-117.0*
1,3,5-Trimethylbenzene	108-67-8	16.3	81.5	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	14.7	73.5	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	26.0	130.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	NA	NA	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		99%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

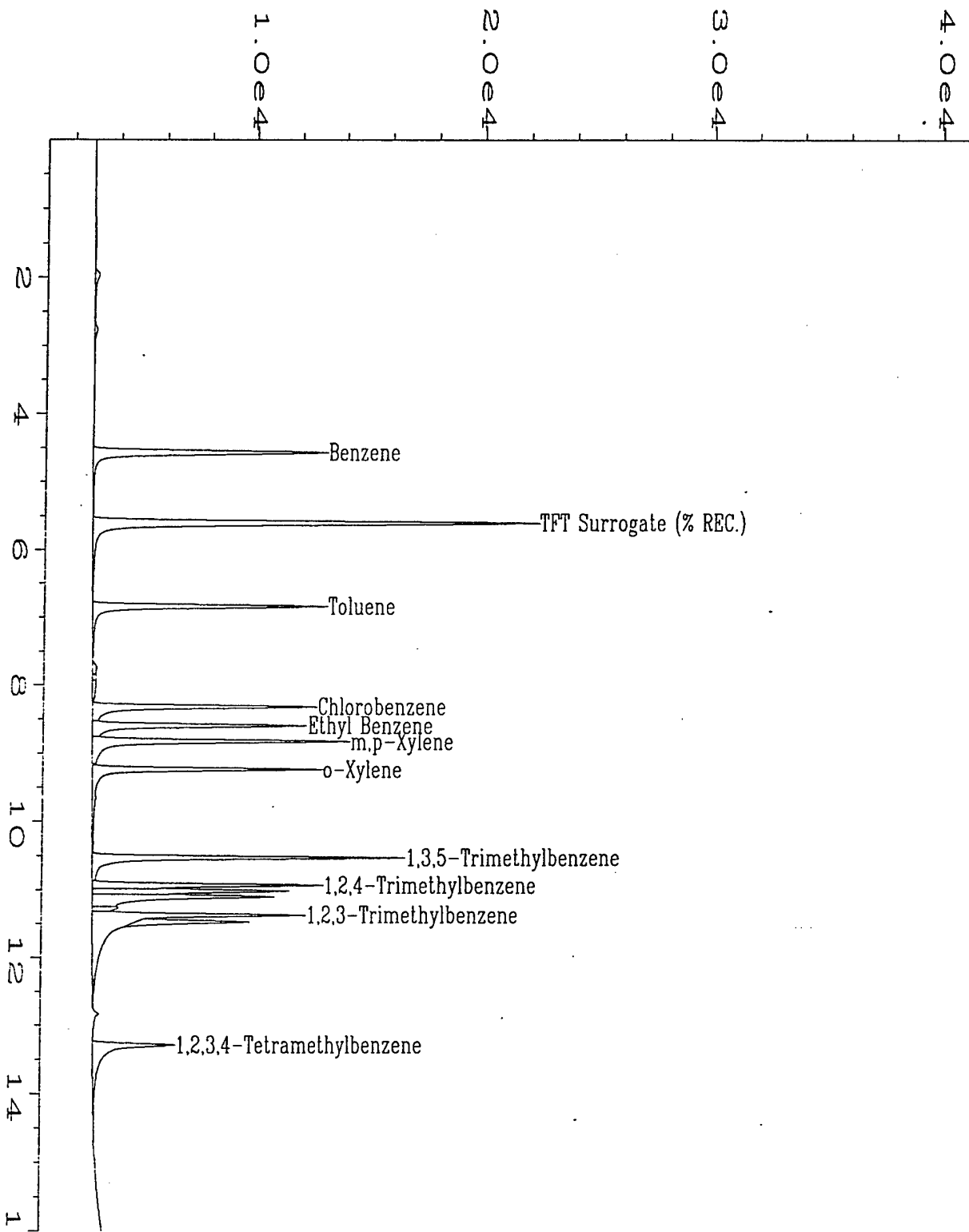
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

AmcClellan
Approved



user modified

Data File Name	: C:\HPCHEM\2\DATA\BX20424\009R0901.D	Page Number	: 1
Operator	: T.Lockwood	Vial Number	: 9
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS042495	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	BX20424.MTH
Required on	: 25 Apr 95 01:07 AM	Analysis Method	: BX20424.MTH
Report Created on:	25 Apr 95 11:00 AM	Sample Amount	: 0
Last Recalib on	: 25 Apr 95 10:43 AM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

BTEX Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS042595	Dilution Factor	: 1.00
Date Extracted/Prepared	: 4/25/95	Method	: 602
Date Analyzed	: 4/25/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2042510

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	16.9	84.5	71.0-119.0*
Toluene	108-88-3	17.0	85.0	73.0-111.0*
Chlorobenzene	108-90-7	17.7	88.5	64.0-119.0*
Ethyl Benzene	100-41-4	17.9	89.5	75.0-114.0*
m,p-Xylene	108-38-3	19.5	97.5	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	17.3	86.5	64.0-111.0*
1,3,5-Trimethylbenzene	108-67-8	19.8	99.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	19.0	95.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	18.9	94.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	22.4	112.0	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		96%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

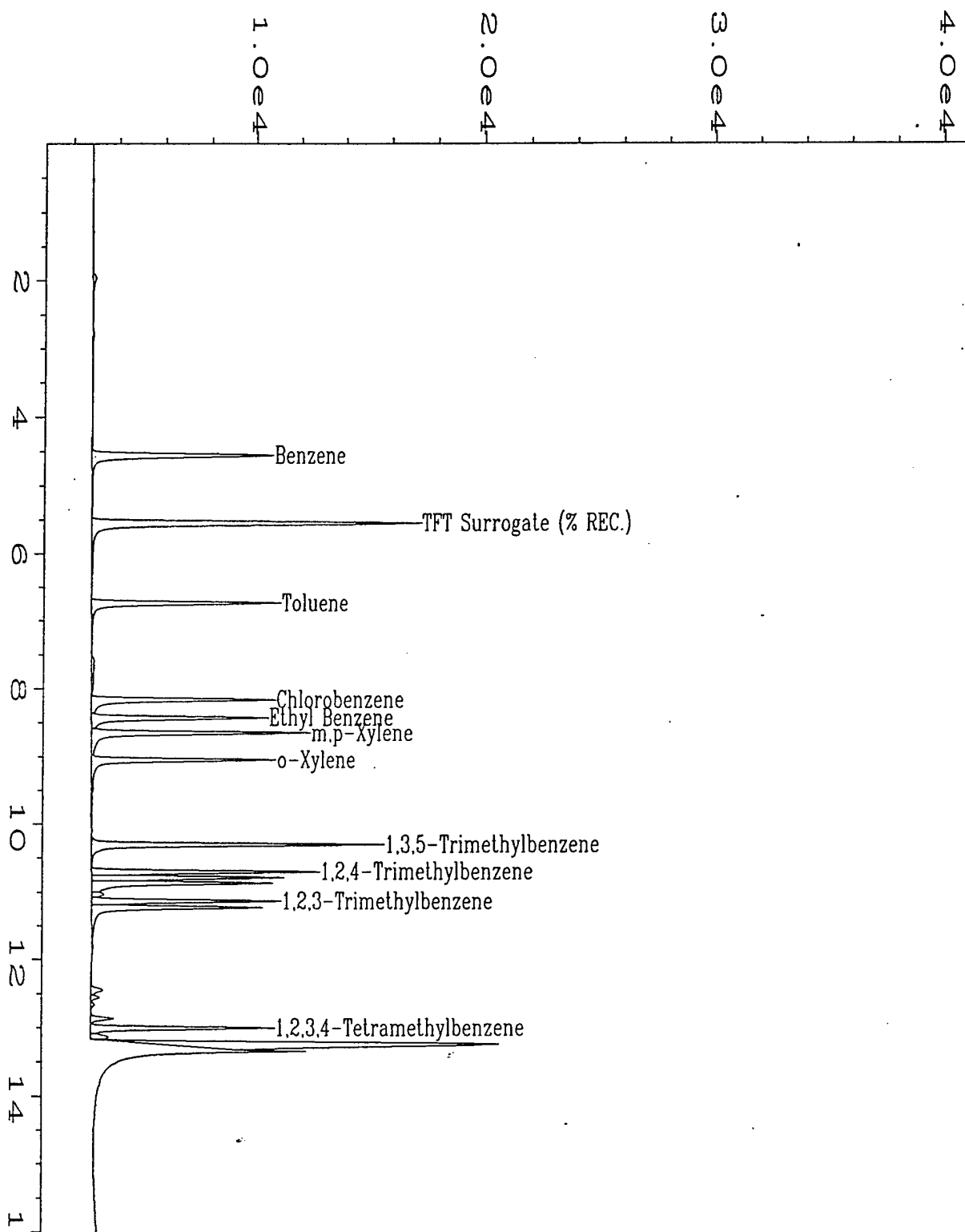
B = Compound found in blank and sample. Compare blank and sample data.

J = Indicates an estimated value when the compound is detected, but is below the Reporting Limit (RL).

NA = Not available/Not analyzed.

K. Cone
Analyst

P. McClellan
Approved
LCS20425.XLS; 5/1/95



Data File Name : D:\2\DATA\BX20425\010R0101.D
 Operator : S.W. Tyson
 Instrument : BTEX2
 Sample Name : LCS042595
 Run Time Bar Code:
 Required on : 25 Apr 95 02:23 PM
 Report Created on: 01 May 95 02:51 PM
 Last Recalib on : 26 APR 95 09:49 AM
 Multiplier : 1

Page Number : 1
 Vial Number : 10
 Injection Number : 1
 Sequence Line : 1
 Instrument Method: BX20425.MTH
 Analysis Method : BX20425.MTH
 Sample Amount : 0
 ISTD Amount :

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Data Report
Laboratory Control Sample (LCS)

LCS Number : LCS2050295 Dilution Factor : 1.00
Date Extracted/Prepared : 5/2/95 Method : 602
Date Analyzed : 5/2/95 Matrix : Water
Spike Amount (ug/L) : 20.0 Lab File No. : BX2050212

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	14.9	74.5	71.0-119.0*
Toluene	108-88-3	15.6	78.0	73.0-111.0*
Chlorobenzene	108-90-7	16.7	83.5	64.0-119.0*
Ethyl Benzene	100-41-4	16.4	82.0	75.0-114.0*
m,p-Xylene	108-38-3	17.0	85.0	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	15.6	78.0	64.0-111.0*
1,3,5-Trimethylbenzene	108-67-8	16.8	84.0	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	17.8	89.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	16.7	83.5	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.9	94.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		90%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

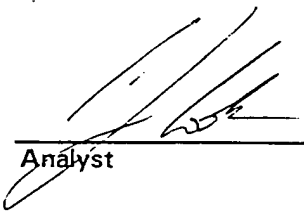
QUALIFIERS:

E = Extrapolated value

U = Compound analyzed for, but not detected.

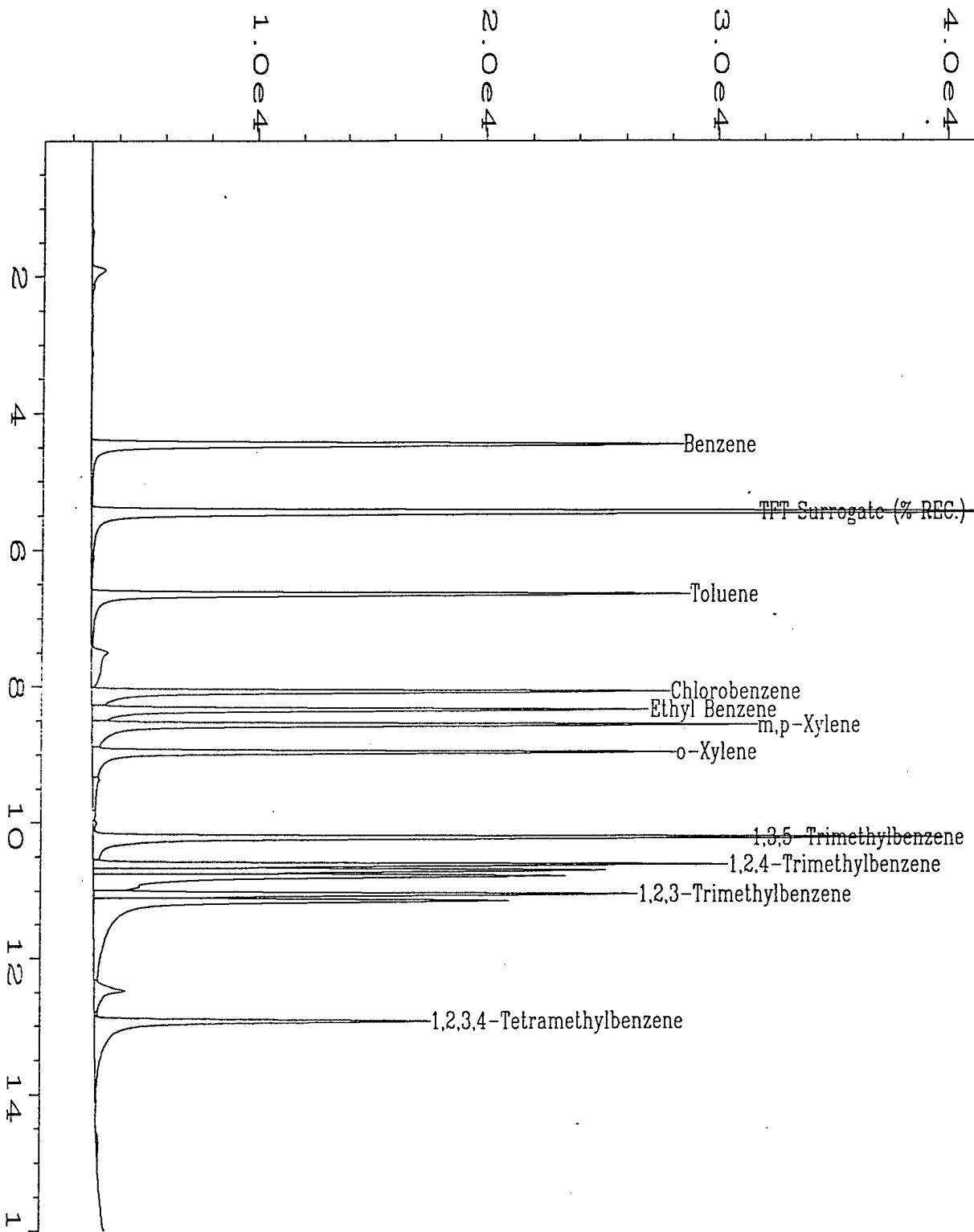
B = Compound found in blank and sample. Compare blank and sample data.

NA = Not available/Not analyzed.


Analyst


Approved

LCSTMB1.XLS; 5/9/95



Data File Name	: C:\HPCHEM\2\DATA\BX20502\012R1001.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 12
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS2050295	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20502.MTH
Acquired on	: 02 May 95 05:03 PM	Analysis Method	: BX20502A.MTH
Report Created on:	: 03 May 95 02:55 PM	Sample Amount	: 0
Recalib on	: 03 MAY 95 02:37 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: REF # 1667		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

EPA 602/8020 Data Report
Laboratory Control Sample (LCS)

LCS Number	: LCS2050395	Dilution Factor	: 1.00
Date Extracted/Prepared	: 5/3/95	Method	: 602
Date Analyzed	: 5/3/95	Matrix	: Water
Spike Amount (ug/L)	: 20.0	Lab File No.	: BX2050310

Compound Name	Cas Number	LCS Concentration ug/L	LCS % Recovery	QC Limit % Recovery
Benzene	71-43-2	17.2	86.0	71.0-119.0*
Toluene	108-88-3	18.1	90.5	73.0-111.0*
Chlorobenzene	108-90-7	19.5	97.5	64.0-119.0*
Ethyl Benzene	100-41-4	18.2	91.0	75.0-114.0*
m,p-Xylene	108-38-3	18.2	91.0	75.0-114.0*
	106-42-3			
o-Xylene	95-47-6	16.8	84.0	64.0-119.0*
1,3,5-Trimethylbenzene	108-67-8	20.4	102	50.0-150.0
1,2,4-Trimethylbenzene	95-63-6	18.4	92.0	50.0-150.0
1,2,3-Trimethylbenzene	526-73-8	19.6	98.0	50.0-150.0
1,2,3,4-Tetramethylbenzene	488-23-3	18.1	90.5	50.0-150.0
Surrogate Recovery (α,α,α -Trifluorotoluene):		98%	70%-130% (QC limits)	

* = Limits established 4/3/95 KSC

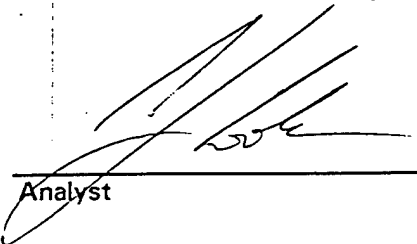
QUALIFIERS:

E = Extrapolated value

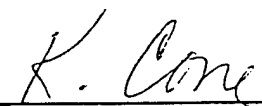
U = Compound analyzed for, but not detected.

B = Compound found in blank and sample. Compare blank and sample data.

NA = Not available/Not analyzed.

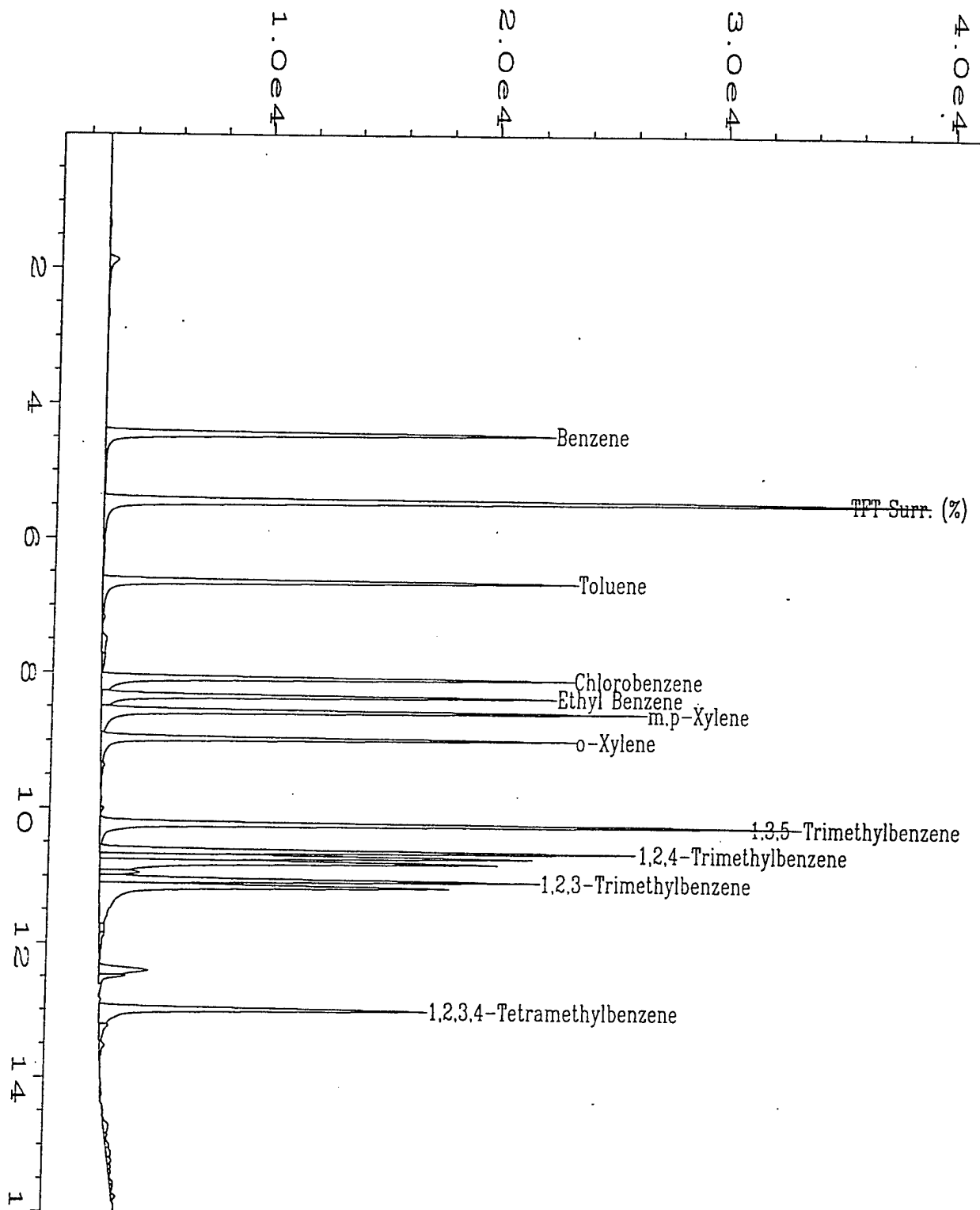


Analyst



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LCS20503.XLS; 5/12/95



Data File Name	: C:\HPCHEM\2\DATA\BX20503\010R1001.D	Page Number	: 1
Operator	: C.J. Cook	Vial Number	: 10
Instrument	: BTEX2	Injection Number	: 1
Sample Name	: LCS2050395	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: BX20503.MTH
Acquired on	: 03 May 95 04:25 PM	Analysis Method	: BX20503A.MTH
Report Created on:	: 04 May 95 08:55 AM	Sample Amount	: 0
Last Recalib on	: 04 MAY 95 08:47 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: REF # 1667		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: CPT-18	Client I.D.	: 722450.2602
Lab Sample Number	: X05923		: SEYMORE J
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0488
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	770 E	0.5
Toluene	108-88-3	11	0.5
Ethyl Benzene	100-41-4	96	0.5
Total Xylenes	1330-20-7	42	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	4	0.5
1,2,4-Trimethylbenzene	526-73-8	13	0.5
1,2,3-Trimethylbenzene	108-67-8	5	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	25	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	8	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	28	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:

1,2 Dichloroethane-d4	90%
Toluene-d8	99%
Bromofluorobenzene	97%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent w
E = Compound is detected but concentration is outside of calibration limit
NA = Not applicable or not available.

Analyst

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VOLATILE ORGANICS ANALYSIS DATA

Client Sample Number	: CPT-18	Client I.D.	: 722450.2602 /
Lab Sample Number	: X05923		SEYMORE JOHNNSC
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0488
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	2 B	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	15	1.0
1,1-Dichloroethane	75-34-3	19	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	30	1.0
Chloroform	67-66-3	U	1.0
1,2-Dichloroethane	107-06-2	16	1.0
2-Butanone	78-93-3	U	10.0
1,1,1-Trichloroethane	71-55-6	6	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	U	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	84	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	770 E	0.5
Bromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	11	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	96	0.5
Styrene	100-42-5	U	1.0
Total Xylenes	1330-20-7	42	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:

1,2 Dichloroethane-d4	90%
Toluene-d8	99%
Bromofluorobenzene	97%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: CPT-18	Client I.D.	: 722450.2602
Lab Sample Number	: X05923		: SEYMORE
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0503
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	830	2.5
Toluene	108-88-3	9	2.5
Ethyl Benzene	100-41-4	98	2.5
Total Xylenes	1330-20-7	46	2.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	U	2.5
1,2,4-Trimethylbenzene	526-73-8	13	2.5
1,2,3-Trimethylbenzene	108-67-8	6	2.5
1,2,3,4-Tetramethylbenzene	488-23-3	25	5.0
Methyl-t-butyl ether (MTBE)	156-60-5	U	5.0
Chlorobenzene	108-90-7	U	5.0
Styrene	100-42-5	U	5.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
ichlorodifluoromethane	75-71-8	U	5.0
isopropyl ether	108-20-3	28	5.0
1,2-Dibromoethane (EDB)	106-93-4	U	5.0
1,3-Dichlorobenzene	541-73-1	U	5.0
1,2-Dichlorobenzene	95-50-1	U	5.0
1,4-Dichlorobenzene	106-46-7	U	5.0

Surrogate Recoveries:

1,2 Dichloroethane-d4	96%
Toluene-d8	102%
Bromofluorobenzene	97%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

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VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: CPT-18	Client I.D.	: 722450.2602 /
Lab Sample Number	: X05923		SEYMORE JOHNSON
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0503
		Method Blank No.	: RB050295

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	830	2.5

Surrogate Recoveries:

1,2 Dichloroethane-d4	96%
Toluene-d8	102%
Bromofluorobenzene	97%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
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* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-4	Client I.D.	: 722450.26
Lab Sample Number	: X05926		: SEYMORE
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0489
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	E	0.5
Toluene	108-88-3	E	0.5
Ethyl Benzene	100-41-4	930 E	0.5
Total Xylenes	1330-20-7	E	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	250	0.5
1,2,4-Trimethylbenzene	526-73-8	680 E	0.5
1,2,3-Trimethylbenzene	108-67-8	320	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	40	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	14	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	3	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:

1,2 Dichloroethane-d4	91%
Toluene-d8	93%
Bromofluorobenzene	96%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-4	Client I.D.	: 722450.2602 /
Lab Sample Number	: X05926		SEYMORE JOHNSON
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0489
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	3 B	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	530 E	1.0
1,1-Dichloroethane	75-34-3	190 U	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	26 U	1.0
Chloroform	67-66-3	U	1.0
1,2-Dichloroethane	107-06-2	40 U	1.0
2-Butanone	78-93-3	U	10.0
1,1,1-Trichloroethane	71-55-6	E	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	U	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	460 E	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	E	0.5
Dibromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	3	1.0
Toluene	108-88-3	E	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	930 E	0.5
Styrene	100-42-5	U	1.0
Total Xylenes	1330-20-7	E	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:

1,2 Dichloroethane-d4	91%
Toluene-d8	93%
Bromofluorobenzene	96%

QC Limits

{83-112}
{93-104}
{87-105}

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-4	Client I.D.	: 722450.26
Lab Sample Number	: X05926		: SEYMORE J
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 10.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0504
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	2,200	5.0
Toluene	108-88-3	3,000	5.0
Ethyl Benzene	100-41-4	1,100	5.0
Total Xylenes	1330-20-7	6,600	5.0
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	69	5.0
1,2,4-Trimethylbenzene	526-73-8	770	5.0
1,2,3-Trimethylbenzene	108-67-8	330	5.0
1,2,3,4-Tetramethylbenzene	488-23-3	47	10.0
Methyl-t-butyl ether (MTBE)	156-60-5	U	10.0
Chlorobenzene	108-90-7	U	10.0
Styrene	100-42-5	U	10.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	10.0
Isopropyl ether	108-20-3	U	10.0
1,2-Dibromoethane (EDB)	106-93-4	U	10.0
1,3-Dichlorobenzene	541-73-1	U	10.0
1,2-Dichlorobenzene	95-50-1	U	10.0
1,4-Dichlorobenzene	106-46-7	U	10.0

Surrogate Recoveries:

1,2 Dichloroethane-d4	96%
Toluene-d8	98%
Bromofluorobenzene	94%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa-
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number : MW-4 Client I.D. : 722450.2602 /
Lab Sample Number : X05926 SEYMORE JOHNSON
Date Sampled : 04/18/95 Lab Project No. : 95-1264
Date Received : 04/19/95 Effective Dilution : 10.00
Date Extracted/Prepared : 05/02/95 Method : 624
Date Analyzed : 05/02/95 Matrix : WATER
Lab File No. : >L0504
Method Blank No. : RB050295

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
1,1-Dichloroethene	75-35-4	760	10.0
1,1,1-Trichloroethane	71-55-6	3,800	5.0
Trichloroethene	79-01-6	520	10.0
Benzene	71-43-2	2,200	5.0
Toluene	108-88-3	3,000	5.0
Ethyl Benzene	100-41-4	1,100	5.0
Total Xylenes	1330-20-7	6,600	5.0

Surrogate Recoveries:

1,2 Dichloroethane-d4 96%
Toluene-d8 98%
Bromofluorobenzene 94%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-12D	Client I.D.	: 722450.2
Lab Sample Number	: X05928		: SEYMORE
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0490
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	140	0.5
Toluene	108-88-3	44	0.5
Ethyl Benzene	100-41-4	14	0.5
Total Xylenes	1330-20-7	85	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	5	0.5
1,2,4-Trimethylbenzene	526-73-8	16	0.5
1,2,3-Trimethylbenzene	108-67-8	7	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	2	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	1	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	2	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:

1,2 Dichloroethane-d4	97%
Toluene-d8	99%
Bromofluorobenzene	94%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

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4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA

Client Sample Number	: MW-12D	Target Compound List	: 722450.2602 /
Lab Sample Number	: X05928	Client I.D.	: SEYMORE JOHNSEN
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0490
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	2 B	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	6	1.0
1,1-Dichloroethane	75-34-3	20	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	9	1.0
Chloroform	67-66-3	U	1.0
1,2-Dichloroethane	107-06-2	3	1.0
2-Butanone	78-93-3	U	10.0
1,1,1-Trichloroethane	71-55-6	3	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	U	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	28	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	140	0.5
Dibromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	44	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	14	0.5
Styrene	100-42-5	U	1.0
Total Xylenes	1330-20-7	85	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:

QC Limits

1,2 Dichloroethane-d4	97%
Toluene-d8	99%
Bromofluorobenzene	94%

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-5	Client I.D.	: 722450.26
Lab Sample Number	: X05931		: SEYMORE
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0491
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	380	0.5
Toluene	108-88-3	5	0.5
Ethyl Benzene	100-41-4	4	0.5
Total Xylenes	1330-20-7	200	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	2	0.5
1,2,4-Trimethylbenzene	526-73-8	64	0.5
1,2,3-Trimethylbenzene	108-67-8	32	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	13	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	4	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	3	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	8	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:

1,2 Dichloroethane-d4	94%
Toluene-d8	99%
Bromofluorobenzene	96%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent w.
E = Compound is detected but concentration is outside of calibration limit.
NA = Not applicable or not available.

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4036 Youngfield Wheat Ridge CO 80033
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VOLATILE ORGANICS ANALYSIS DATA

Client Sample Number	: MW-5	Client I.D.	: 722450.2602 /
Lab Sample Number	: X05931		: SEYMORE JOHNSON
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0491
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	2 B	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	31	1.0
1,1-Dichloroethane	75-34-3	16	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	64	1.0
Chloroform	67-66-3	10 B	1.0
1,2-Dichloroethane	107-06-2	4	1.0
2-Butanone	78-93-3	U	10.0
1,1,1-Trichloroethane	71-55-6	85	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	U	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	110	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	380	0.5
Dibromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	5	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	4	0.5
Styrene	100-42-5	3	1.0
Total Xylenes	1330-20-7	200	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:

1,2 Dichloroethane-d4	94%
Toluene-d8	99%
Bromofluorobenzene	96%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

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NA = Not applicable or not available.

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VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-8	Client I.D.	: 722450.2
Lab Sample Number	: X05932		: SEYMORE
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0492
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	440	0.5
Toluene	108-88-3	6	0.5
Ethyl Benzene	100-41-4	230	0.5
Total Xylenes	1330-20-7	16	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	1	0.5
1,2,4-Trimethylbenzene	526-73-8	3	0.5
1,2,3-Trimethylbenzene	108-67-8	2	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	24	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	2	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	13	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:

1,2 Dichloroethane-d4	98%
Toluene-d8	100%
Bromofluorobenzene	97%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
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* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA

Target Compound List

Client Sample Number	: MW-8	Client I.D.	: 722450.2602 /
Lab Sample Number	: X05932		SEYMORE JOHNSON
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0492
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	2 B	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	1	1.0
1,1-Dichloroethane	75-34-3	U	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	44	1.0
Chloroform	67-66-3	U	1.0
1,2-Dichloroethane	107-06-2	9	1.0
2-Butanone	78-93-3	U	10.0
1,1,1-Trichloroethane	71-55-6	U	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	U	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	32	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	440	0.5
Dibromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	6	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	230	0.5
Styrene	100-42-5	U	1.0
Total Xylenes	1330-20-7	16	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:

QC Limits

1,2 Dichloroethane-d4	98%	(83-112)
Toluene-d8	100%	(93-104)
Bromofluorobenzene	97%	(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-3	Client I.D.	: 722450.2
Lab Sample Number	: X05933		: SEYMORE
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0493
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	450	0.5
Toluene	108-88-3	26	0.5
Ethyl Benzene	100-41-4	230	0.5
Total Xylenes	1330-20-7	320	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	46	0.5
1,2,4-Trimethylbenzene	526-73-8	100	0.5
1,2,3-Trimethylbenzene	108-67-8	29	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	30	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	19	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	4	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:

		QC Limits
1,2 Dichloroethane-d4	99%	(83-112)
Toluene-d8	98%	(93-104)
Bromofluorobenzene	97%	(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

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4036 Youngfield Wheat Ridge CO 80033
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VOLATILE ORGANICS ANALYSIS DATA
Target Compound List

Client Sample Number	: MW-3	Client I.D.	: 722450.2602 /
Lab Sample Number	: X05933		SEYMORE JOHNSON
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0493
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	2 B	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	10.0
Carbon Disulfide	75-15-0	U	1.0
1,1-Dichloroethene	75-35-4	1 U	1.0
1,1-Dichloroethane	75-34-3	U	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	300 U	1.0
Chloroform	67-66-3	U	1.0
1,2-Dichloroethane	107-06-2	4 U	1.0
2-Butanone	78-93-3	U	10.0
1,1,1-Trichloroethane	71-55-6	U	0.5
Carbon Tetrachloride	56-23-5	U	2.0
Bromodichloromethane	75-27-4	U	1.0
Vinyl Acetate	108-05-4	U	10.0
1,2-Dichloropropane	78-87-5	U	1.0
Trans-1,3-Dichloropropene	10061-02-6	U	2.0
Trichloroethene	79-01-6	160 U	1.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	450 U	0.5
Dibromochloromethane	124-48-1	U	1.0
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	5.0
Bromoform	75-25-2	U	1.0
4-Methyl-2-Pentanone	108-10-1	U	5.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	1.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	26 U	0.5
Chlorobenzene	108-90-7	U	1.0
Ethyl Benzene	100-41-4	230 U	0.5
Styrene	100-42-5	U	1.0
Total Xylenes	1330-20-7	320 U	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:

1,2 Dichloroethane-d4	99%
Toluene-d8	98%
Bromofluorobenzene	97%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

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VOLATILE ORGANICS ANALYSIS DATA

METHOD BLANK REPORT

Method Blank Number : RB050195 Client I.D. : 722450.2
Date Extracted/Prepared : 05/01/95 SEYMORE JOHN
Date Analyzed : 05/01/95 Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 624
Lab File No. : >L0486

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	U	0.5
Toluene	108-88-3	U	0.5
Ethyl Benzene	100-41-4	U	0.5
Total Xylenes	1330-20-7	U	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	U	0.5
1,2,4-Trimethylbenzene	526-73-8	U	0.5
1,2,3-Trimethylbenzene	108-67-8	U	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	U	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	U	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	U	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:

1,2 Dichloroethane-d4 104%
Toluene-d8 102%
Bromofluorobenzene 98%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033 -
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA

METHOD BLANK REPORT

Method Blank Number : RB050195 Target Compound List
Date Extracted/Prepared : 05/01/95 Client I.D. : 722450.2602 /
Date Analyzed : 05/01/95 Lab Project No. : SEYMORE JOHNSO
Effective Dilution : 95-1264
Method : 1.00
Lab File No. : 624
>L0486

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	3	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	UU	1.0
Methylene Chloride	75-09-2	UU	1.0
Acetone	67-64-1	UU	1.0
Carbon Disulfide	75-15-0	UU	10.0
1,1-Dichloroethene	75-35-4	UU	1.0
1,1-Dichloroethane	75-34-3	UU	1.0
Trans-1,2-Dichloroethene	156-60-5	UU	1.0
Cis-1,2-Dichloroethene	156-59-2	U	1.0
Chloroform	67-66-3	2	1.0
1,2-Dichloroethane	107-06-2	U	1.0
2-Butanone	78-93-3	UUU	10.0
1,1,1-Trichloroethane	71-55-6	UUU	0.5
Carbon Tetrachloride	56-23-5	UUU	2.0
Bromodichloromethane	75-27-4	UUU	1.0
Vinyl Acetate	108-05-4	UUU	10.0
1,2-Dichloropropane	78-87-5	UUU	1.0
Trans-1,3-Dichloropropene	10061-02-6	UUU	2.0
Trichloroethene	79-01-6	UUU	1.0
1,1,2-Trichloroethane	79-00-5	UUU	1.0
Benzene	71-43-2	UUU	0.5
Dibromochloromethane	124-48-1	UUU	1.0
Cis-1,3-Dichloropropene	10061-01-5	UUU	1.0
2-Chloroethylvinyl Ether	110-75-8	UUU	5.0
Bromoform	75-25-2	UUU	1.0
4-Methyl-2-Pentanone	108-10-1	UUU	5.0
2-Hexanone	591-78-6	UUU	5.0
1,1,2,2-Tetrachloroethane	79-34-5	UUU	1.0
Tetrachloroethene	127-18-4	UUU	1.0
Toluene	108-88-3	UUU	0.5
Chlorobenzene	108-90-7	UUU	1.0
Ethyl Benzene	100-41-4	UUU	0.5
Styrene	100-42-5	UUU	1.0
Total Xylenes	1330-20-7	UUU	0.5
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:

		QC Limits
1,2 Dichloroethane-d4	104%	(83-112)
Toluene-d8	102%	(93-104)
Bromofluorobenzene	98%	(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

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VOLATILE ORGANICS ANALYSIS DATA

METHOD BLANK REPORT

GC Confirmation and Additional Compounds

Method Blank Number : RB050295 Client I.D. : 722450.2
Date Extracted/Prepared : 05/02/95 SEYMORE J. N
Date Analyzed : 05/02/95 Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 624
Lab File No. : >L0501

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Benzene	71-43-2	U	0.5
Toluene	108-88-3	U	0.5
Ethyl Benzene	100-41-4	U	0.5
Total Xylenes	1330-20-7	U	0.5
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	U	0.5
1,2,4-Trimethylbenzene	526-73-8	U	0.5
1,2,3-Trimethylbenzene	108-67-8	U	0.5
1,2,3,4-Tetramethylbenzene	488-23-3	U	1.0
Methyl-t-butyl ether (MTBE)	156-60-5	U	1.0
Chlorobenzene	108-90-7	U	1.0
Styrene	100-42-5	U	1.0

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	U	1.0
Isopropyl ether	108-20-3	U	1.0
1,2-Dibromoethane (EDB)	106-93-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	1.0
1,2-Dichlorobenzene	95-50-1	U	1.0
1,4-Dichlorobenzene	106-46-7	U	1.0

Surrogate Recoveries:

1,2 Dichloroethane-d4 103%
Toluene-d8 99%
Bromofluorobenzene 95%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

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VOLATILE ORGANICS ANALYSIS DATA
METHOD BLANK REPORT

Method Blank Number : RB050295 Client I.D. : 722450.2602 /
Date Extracted/Prepared : 05/02/95 SEYMORE JOHNSO
Date Analyzed : 05/02/95 Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 624
Lab File No. : >L0501

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Chloromethane	74-87-3	U	1.0
Bromomethane	74-83-9	3	1.0
Vinyl Chloride	75-01-4	U	1.0
Chloroethane	75-00-3	U	1.0
Methylene Chloride	75-09-2	U	1.0
Acetone	67-64-1	U	1.0
Carbon Disulfide	75-15-0	U	10.0
1,1-Dichloroethene	75-35-4	U	1.0
1,1-Dichloroethane	75-34-3	U	1.0
Trans-1,2-Dichloroethene	156-60-5	U	1.0
Cis-1,2-Dichloroethene	156-59-2	U	1.0
Chloroform	67-66-3	2	1.0
1,2-Dichloroethane	107-06-2	U	1.0
2-Butanone	78-93-3	U	1.0
1,1,1-Trichloroethane	71-55-6	U	10.0
Carbon Tetrachloride	56-23-5	U	0.5
Bromodichloromethane	75-27-4	1	2.0
Vinyl Acetate	108-05-4	U	1.0
1,2-Dichloropropane	78-87-5	U	10.0
Trans-1,3-Dichloropropene	10061-02-6	U	1.0
Trichloroethene	79-01-6	U	2.0
1,1,2-Trichloroethane	79-00-5	U	1.0
Benzene	71-43-2	U	1.0
Dibromochloromethane	124-48-1	U	0.5
Cis-1,3-Dichloropropene	10061-01-5	U	1.0
2-Chloroethylvinyl Ether	110-75-8	U	1.0
Bromoform	75-25-2	U	5.0
4-Methyl-2-Pentanone	108-10-1	U	1.0
2-Hexanone	591-78-6	U	5.0
1,1,2,2-Tetrachloroethane	79-34-5	U	5.0
Tetrachloroethene	127-18-4	U	1.0
Toluene	108-88-3	U	1.0
Chlorobenzene	108-90-7	U	0.5
Ethyl Benzene	100-41-4	U	1.0
Styrene	100-42-5	U	0.5
Total Xylenes	1330-20-7	U	1.0
Trichlorofluoromethane	75-69-4	U	0.5

Surrogate Recoveries:

1,2 Dichloroethane-d4	103%	QC Limits
Toluene-d8	99%	(83-112)
Bromofluorobenzene	95%	(93-104)
		(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: MW-3 REF	Client I.D.	: 722450.26
Lab Sample Number	: X05933MS		: SEYMORE
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0494
		Method Blank No.	: RB050195

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	480	152%
Toluene	108-88-3	45	95%
Ethyl Benzene	100-41-4	250	78%
Total Xylenes	1330-20-7	340	108%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	47 NS	---
1,2,4-Trimethylbenzene	526-73-8	110 NS	---
1,2,3-Trimethylbenzene	108-67-8	30 NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	31 NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	34	74%
Chlorobenzene	108-90-7	21	103%
Styrene	100-42-5	23	116%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	REC %
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	4 NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	20	100%
1,2-Dichlorobenzene	95-50-1	21	103%
1,4-Dichlorobenzene	106-46-7	19	95%

Surrogate Recoveries:

1,2 Dichloroethane-d4	101%
Toluene-d8	97%
Bromofluorobenzene	98%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

NS = Not spiked.

U = Compound analyzed for, but not detected above the reporting limit.

B = Compound found in blank and sample. Compare blank and sample data.

* = Reporting limits are roughly the method detection limits for reagent wa

E = Compound is detected but concentration is outside of calibration limits

NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA

Client Sample Number	: MW-3 REF	Client I.D.	: 722450.2602 /
Lab Sample Number	: X05933MS		SEYMORE JOHNSO
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 05/01/95	Method	: 624
Date Analyzed	: 05/01/95	Matrix	: WATER
		Lab File No.	: >L0494
		Method Blank No.	: RB050195

Compound Name	Cas Number	Conc. ug/L	REC %
Chloromethane	74-87-3	12	62%
Bromomethane	74-83-9	18 B	80%
Vinyl Chloride	75-01-4	12	60%
Chloroethane	75-00-3	17	85%
Methylene Chloride	75-09-2	22	110%
Acetone	67-64-1	24	120%
Carbon Disulfide	75-15-0	19	94%
1,1-Dichloroethene	75-35-4	23	110%
1,1-Dichloroethane	75-34-3	21	103%
Trans-1,2-Dichloroethene	156-60-5	20	98%
Cis-1,2-Dichloroethene	156-59-2	320	109%
Chloroform	67-66-3	25 B	123%
1,2-Dichloroethane	107-06-2	21	84%
2-Butanone	78-93-3	21	103%
1,1,1-Trichloroethane	71-55-6	18	88%
Carbon Tetrachloride	56-23-5	19	93%
Bromodichloromethane	75-27-4	19	95%
Vinyl Acetate	108-05-4	17	85%
1,2-Dichloropropane	78-87-5	22	108%
Trans-1,3-Dichloropropene	10061-02-6	10	48%
Trichloroethene	79-01-6	180	88%
1,1,2-Trichloroethane	79-00-5	21	105%
Benzene	71-43-2	480	152%
Dibromochloromethane	124-48-1	19	97%
Cis-1,3-Dichloropropene	10061-01-5	18	92%
2-Chloroethylvinyl Ether	110-75-8	1	7%
Bromoform	75-25-2	17	84%
4-Methyl-2-Pentanone	108-10-1	17	84%
2-Hexanone	591-78-6	23	113%
1,1,2,2-Tetrachloroethane	79-34-5	18	90%
Tetrachloroethene	127-18-4	20	99%
Toluene	108-88-3	45	95%
Chlorobenzene	108-90-7	21	103%
Ethyl Benzene	100-41-4	250	78%
Styrene	100-42-5	23	116%
Total Xylenes	1330-20-7	340	108%
Trichlorofluoromethane	75-69-4	18	91%

Surrogate Recoveries:

1,2 Dichloroethane-d4	101%
Toluene-d8	97%
Bromofluorobenzene	98%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: CPT-18 REF	Client I.D.	: 722450.26
Lab Sample Number	: X05923MS		: SEYMORE
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0505
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	890	56%
Toluene	108-88-3	110	101%
Ethyl Benzene	100-41-4	190	92%
Total Xylenes	1330-20-7	120	74%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	NS	---
1,2,4-Trimethylbenzene	526-73-8	13 NS	---
1,2,3-Trimethylbenzene	108-67-8	5 NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	23 NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	48	48%
Chlorobenzene	108-90-7	100	100%
Styrene	100-42-5	4	4%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	28 NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	100	100%
1,2-Dichlorobenzene	95-50-1	100	100%
1,4-Dichlorobenzene	106-46-7	94	94%

Surrogate Recoveries:

1,2 Dichloroethane-d4	99%
Toluene-d8	97%
Bromofluorobenzene	96%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

NS = Not spiked.

U = Compound analyzed for, but not detected above the reporting limit.

B = Compound found in blank and sample. Compare blank and sample data.

* = Reporting limits are roughly the method detection limits for reagent water.

E = Compound is detected but concentration is outside of calibration limits.

NA = Not applicable or not available.

Analyst

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EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021

VOLATILE ORGANICS ANALYSIS DATA

Client Sample Number : CPT-18 REF
Lab Sample Number : X05923MS
Date Sampled : 04/18/95
Date Received : 04/19/95
Date Extracted/Prepared : 05/02/95
Date Analyzed : 05/02/95
Target Compound List :
Client I.D. : 722450.2602 / SEYMORE JOHN SO
Lab Project No. : 95-1264
Effective Dilution : 5.00
Method : 624
Matrix : WATER
Lab File No. : >L0505
Method Blank No. : RB050295

Compound Name	Cas Number	Conc. ug/L	REC %
Chloromethane	74-87-3	54	54%
Bromomethane	74-83-9	89 B	89%
Vinyl Chloride	75-01-4	61	61%
Chloroethane	75-00-3	89	89%
Methylene Chloride	75-09-2	110	110%
Acetone	67-64-1	142	142%
Carbon Disulfide	75-15-0	100	100%
1,1-Dichloroethene	75-35-4	130	130%
1,1-Dichloroethane	75-34-3	120	120%
Trans-1,2-Dichloroethene	156-60-5	99	99%
Cis-1,2-Dichloroethene	156-59-2	140	140%
Chloroform	67-66-3	130 B	130%
1,2-Dichloroethane	107-06-2	110	110%
2-Butanone	78-93-3	95	95%
1,1,1-Trichloroethane	71-55-6	97	97%
Carbon Tetrachloride	56-23-5	100	100%
Bromodichloromethane	75-27-4	96 B	96%
Vinyl Acetate	108-05-4	63	63%
1,2-Dichloropropane	78-87-5	100	100%
Trans-1,3-Dichloropropene	10061-02-6	54	54%
Trichloroethene	79-01-6	190	190%
1,1,2-Trichloroethane	79-00-5	100	100%
Benzene	71-43-2	890	89%
Dibromochloromethane	124-48-1	92	92%
Cis-1,3-Dichloropropene	10061-01-5	98	98%
2-Chloroethylvinyl Ether	110-75-8	21	21%
Bromoform	75-25-2	82	82%
4-Methyl-2-Pentanone	108-10-1	90	90%
2-Hexanone	591-78-6	82	82%
1,1,2,2-Tetrachloroethane	79-34-5	84	84%
Tetrachloroethene	127-18-4	110	110%
Toluene	108-88-3	110	110%
Chlorobenzene	108-90-7	100	100%
Ethyl Benzene	100-41-4	190	190%
Styrene	100-42-5	4	4%
Total Xylenes	1330-20-7	120	120%
Trichlorofluoromethane	75-69-4	94	94%

Surrogate Recoveries:

1,2 Dichloroethane-d4 99%
Toluene-d8 97%
Bromofluorobenzene 96%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water.
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: 624 REF	Client I.D.	: 722450.2
Lab Sample Number	: 624 REF	Lab Project No.	: 95-1264
Date Sampled	: NA	Effective Dilution	: 1.00
Date Received	: NA	Method	: 624
Date Extracted/Prepared	: 05/02/95	Matrix	: WATER
Date Analyzed	: 05/02/95	Lab File No.	: >L0506
		Method Blank No.	: RB050295

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	22	109%
Toluene	108-88-3	21	105%
Ethyl Benzene	100-41-4	22	109%
Total Xylenes	1330-20-7	24	118%
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	NS	---
1,2,4-Trimethylbenzene	526-73-8	NS	---
1,2,3-Trimethylbenzene	108-67-8	NS	---
1,2,3,4-Tetramethylbenzene	488-23-3	NS	---
Methyl-t-butyl ether (MTBE)	156-60-5	8	40%
Chlorobenzene	108-90-7	23	114%
Styrene	100-42-5	22	110%

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	22	108%
1,2-Dichlorobenzene	95-50-1	22	108%
1,4-Dichlorobenzene	106-46-7	20	102%

Surrogate Recoveries:

1,2 Dichloroethane-d4	107%
Toluene-d8	100%
Bromofluorobenzene	98%

QC Limits

(83-112)
(93-104)
(87-105)

QUALIFIERS:

NS = Not spiked.
U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
NA = Not applicable or not available.

Analyst

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VOLATILE ORGANICS ANALYSIS DATA

Client Sample Number : 624 REF Client I.D. : 722450.2602 /
Lab Sample Number : 624 REF SEYMORE JOHNSTON
Date Sampled : NA Lab Project No. : 95-1264
Date Received : NA Effective Dilution : 1.00
Date Extracted/Prepared : 05/02/95 Method : 624
Date Analyzed : 05/02/95 Matrix : WATER
Lab File No. : >L0506
Method Blank No. : RB050295

Compound Name	Cas Number	Conc. ug/L	REC %
Chloromethane	74-87-3	11	56%
Bromomethane	74-83-9	19 B	97%
Vinyl Chloride	75-01-4	13	64%
Chloroethane	75-00-3	19	95%
Methylene Chloride	75-09-2	23	115%
Acetone	67-64-1	29	145%
Carbon Disulfide	75-15-0	21	107%
1,1-Dichloroethene	75-35-4	25	127%
1,1-Dichloroethane	75-34-3	22	111%
Trans-1,2-Dichloroethene	156-60-5	21	106%
Cis-1,2-Dichloroethene	156-59-2	23	116%
Chloroform	67-66-3	26 B	128%
1,2-Dichloroethane	107-06-2	23	115%
2-Butanone	78-93-3	22	108%
1,1,1-Trichloroethane	71-55-6	20	99%
Carbon Tetrachloride	56-23-5	22	112%
Bromodichloromethane	75-27-4	21 B	104%
Vinyl Acetate	108-05-4	6	32%
1,2-Dichloropropane	78-87-5	22	112%
Trans-1,3-Dichloropropene	10061-02-6	12	62%
Trichloroethene	79-01-6	25	124%
1,1,2-Trichloroethane	79-00-5	22	112%
Benzene	71-43-2	22	109%
Dibromochloromethane	124-48-1	21	103%
Cis-1,3-Dichloropropene	10061-01-5	22	112%
2-Chloroethylvinyl Ether	110-75-8	4	19%
Bromoform	75-25-2	18	89%
4-Methyl-2-Pentanone	108-10-1	22	110%
2-Hexanone	591-78-6	21	106%
1,1,2,2-Tetrachloroethane	79-34-5	19	94%
Tetrachloroethene	127-18-4	23	117%
Toluene	108-88-3	21	105%
Chlorobenzene	108-90-7	23	114%
Ethyl Benzene	100-41-4	22	109%
Styrene	100-42-5	22	110%
Total Xylenes	1330-20-7	24	118%
Trichlorofluoromethane	75-69-4	20	100%

Surrogate Recoveries:

1,2 Dichloroethane-d4 107%
Toluene-d8 100%
Bromofluorobenzene 98%

QC Limits

{83-112}
{93-104}
{87-105}

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limit.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent water
E = Compound is detected but concentration is outside of calibration limits.
NA = Not applicable or not available.

Analyst

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VOLATILE ORGANICS ANALYSIS DATA
GC Confirmation and Additional Compounds

Client Sample Number	: TMB LFB	Client I.D.	: 722450.2
Lab Sample Number	: TMB LFB		: SEYMORE
Date Sampled	: NA	Lab Project No.	: 95-1264
Date Received	: NA	Effective Dilution	: 5.00
Date Extracted/Prepared	: 05/02/95	Method	: 624
Date Analyzed	: 05/02/95	Matrix	: WATER
		Lab File No.	: >L0507
		Method Blank No.	: TMB LFB

GC CONFIRMATION

Compound Name	Cas Number	Conc. ug/L	REC %
Benzene	71-43-2	NS	---
Toluene	108-88-3	NS	---
Ethyl Benzene	100-41-4	NS	---
Total Xylenes	1330-20-7	NS	---
1,3,5-Trimethylbenzene (Mesitylene)	95-63-6	18	90%
1,2,4-Trimethylbenzene	526-73-8	17	85%
1,2,3-Trimethylbenzene	108-67-8	19	94%
1,2,3,4-Tetramethylbenzene	488-23-3	21	107%
Methyl-t-butyl ether (MTBE)	156-60-5	NS	---
Chlorobenzene	108-90-7	NS	---
Styrene	100-42-5	NS	---

ADDITIONAL COMPOUNDS

Compound Name	Cas Number	Conc. ug/L	REC %
Dichlorodifluoromethane	75-71-8	NS	---
Isopropyl ether	108-20-3	NS	---
1,2-Dibromoethane (EDB)	106-93-4	NS	---
1,3-Dichlorobenzene	541-73-1	NS	---
1,2-Dichlorobenzene	95-50-1	NS	---
1,4-Dichlorobenzene	106-46-7	NS	---

Surrogate Recoveries:

QC Limits

1,2 Dichloroethane-d4	106%	(83-112)
Toluene-d8	102%	(93-104)
Bromofluorobenzene	99%	(87-105)

QUALIFIERS:

NS = Not spiked.

U = Compound analyzed for, but not detected above the reporting limit.

B = Compound found in blank and sample. Compare blank and sample data.

* = Reporting limits are roughly the method detection limits for reagent w.

E = Compound is detected but concentration is outside of calibration limit.

NA = Not applicable or not available.

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Semivolatile Analysis Data Report
Page 1

Client Sample Number : MW-4
Lab Sample Number : X05926
Date Sampled : 04/18/95
Date Received : 04/19/95
Date Extracted/Prepared : 04/21/95
Date Analyzed : 04/25/95

Client I.D. : 722450.2602 / SEYMORE JOHNS
Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 625
Matrix : WATER
Lab File No. : >28585
Method Blank No. : WB042195

BASE/NEUTRALS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
bis(2-Chloroethyl) Ether	111-44-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	0.5
1,4-Dichlorobenzene	106-46-7	U	0.5
1,2-Dichlorobenzene	95-50-1	U	0.5
bis(2-chloroisopropyl) Ether	108-60-1	U	1.0
N-Nitroso-Di-n-Propylamine	621-64-7	U	1.0
Hexachloroethane	67-72-1	U	1.0
Nitrobenzene	98-95-3	U	1.0
Isophorone	78-59-1	U	1.0
bis(2-Chloroethoxy) Methane	111-91-1	U	1.0
1,2,4-Trichlorobenzene	120-82-1	U	1.0
Naphthalene	91-20-3	180	0.5
4-Chloroaniline	106-47-8	U	2.0
Hexachlorobutadiene	87-68-3	U	0.5
2-Methylnaphthalene	91-57-6	57	0.5
Hexachlorocyclopentadiene	77-47-4	U	2.0
2-Chloronaphthalene	91-58-7	U	0.5
2-Nitroaniline	88-74-4	U	2.0
Dimethylphthalate	131-11-3	U	0.5
2,6-Dinitrotoluene	606-20-2	U	2.0
Acenaphthylene	208-96-8	2	0.5
o-Nitroaniline	99-09-2	U	2.0
Acenaphthene	83-32-9	5	0.5
Dibenzofuran	132-64-9	U	0.5
2,4-Dinitrotoluene	121-14-2	U	0.5
Diethylphthalate	84-66-2	U	2.0
4-Chlorophenyl-phenylether	7005-72-3	U	0.5
Fluorene	86-73-7	5	0.5
4-Nitroaniline	100-01-6	U	2.0
N-Nitrosodiphenylamine	86-30-6	U	0.5
4-Bromophenyl-phenylether	101-55-3	U	0.5
Hexachlorobenzene	118-74-1	U	0.5
Phenanthrene	85-01-8	11	0.5
Anthracene	120-12-7	3	0.5
Di-n-Butylphthalate	84-74-2	U	0.5
Fluoranthene	206-44-0	2	0.5
Pyrene	129-00-0	1	0.5
Butylbenzylphthalate	85-68-7	U	0.5
3,3'-Dichlorobenzidine	91-94-1	U	0.5
Benzo(a)Anthracene	56-55-3	U	2.0
bis(2-Ethylhexyl)Phthalate	117-81-7	1	0.5
Chrysene	218-01-9	U	0.5
Di-n-Octyl Phthalate	117-84-0	U	0.5
Benzo(b)Fluoranthene	205-99-2	U	0.5
Benzo(k)Fluoranthene	207-08-9	U	0.5
Benzo(a)Pyrene	50-32-8	U	0.5
Indeno(1,2,3-cd)Pyrene	193-39-5	U	0.5
Dibenz(a,h)Anthracene	53-70-3	U	0.5
Benzo(g,h,i)Perylene	191-24-2	U	0.5

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Semivolatile Analysis Data Report
Page 2

Client Sample Number	: MW-4	Client I.D.	: 722450.2
Lab Sample Number	: X05926		: SEYMORE JO.
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 04/21/95	Method	: 625
Date Analyzed	: 04/25/95	Matrix	: WATER
		Lab File No.	: >28585
		Method Blank No.	: WB042195

ACIDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Phenol	108-95-2	U	2.0
2-Chlorophenol	95-57-8	U	2.0
Benzylalcohol	100-51-6	U	5.0
2-Methylphenol	95-48-7	11	1.0
4-Methylphenol	106-44-5	11	1.0
2-Nitrophenol	88-75-5	U	2.0
2,4-Dimethylphenol	105-67-9	10	2.0
Benzoic Acid	65-85-0	U	5.0
2,4-Dichlorophenol	120-83-2	U	2.0
4-Chloro-3-Methylphenol	59-50-7	U	2.0
2,4,6-Trichlorophenol	88-06-2	U	2.0
2,4-Dinitrophenol	51-28-5	U	10.0
4-Nitrophenol	100-02-7	U	5.0
4,6-Dinitro-2-Methylphenol	534-52-1	U	10.0
Pentachlorophenol	87-86-5	U	5.0
2,4,5-Trichlorophenol	95-95-4	U	2.0

Expected Surrogate Recoveries:

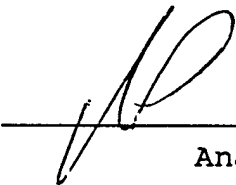
Nitrobenzene-d5	100
2-Fluorobiphenyl	100
Terphenyl-d14	100
Phenol-d6	200
2-Fluorophenol	200
2,4,6 Tribromophenol	200

Actual Recoveries:


ug/L	37%	(35-107)
ug/L	70%	(45-105)
ug/L	60%	(33- 104)
ug/L	57%	(20- 94)
ug/L	64%	(22- 88)
ug/L	74%	(17- 90)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limits.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
Unless otherwise noted concentrations for soils are reported on a
dry weight basis. (NA = not applicable or not available)



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Semivolatile Analysis Data Report
Page 1

Client Sample Number : MW-4 REF
Lab Sample Number : X05926 REF
Date Sampled : 04/18/95
Date Received : 04/19/95
Date Extracted/Prepared : 04/21/95
Date Analyzed : 04/25/95

Client I.D. : 722450.2602 /
SEYMORE JOHNS
Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 625
Matrix : WATER
Lab File No. : >28586
Method Blank No. : WB042195

BASE/NEUTRALS

Compound Name	Cas Number	Conc. ug/L	REC %
bis(2-Chloroethyl) Ether	111-44-4	61	61%
1,3-Dichlorobenzene	541-73-1	80	80%
1,4-Dichlorobenzene	106-46-7	84	84%
1,2-Dichlorobenzene	95-50-1	84	84%
bis(2-chloroisopropyl) Ether	108-60-1	99	99%
N-Nitroso-Di-n-Propylamine	621-64-7	120	120%
Hexachloroethane	67-72-1	70	70%
Nitrobenzene	98-95-3	45	45%
Isophorone	78-59-1	85	85%
bis(2-Chloroethoxy) Methane	111-91-1	100	100%
1,2,4-Trichlorobenzene	120-82-1	90	90%
Naphthalene	91-20-3	260	75%
4-Chloroaniline	106-47-8	NS	---
Hexachlorobutadiene	87-68-3	89	89%
2-Methylnaphthalene	91-57-6	NS	---
Hexachlorocyclopentadiene	77-47-4	58	58%
2-Chloronaphthalene	91-58-7	100	100%
2-Nitroaniline	88-74-4	NS	---
Dimethylphthalate	131-11-3	18	18%
2,6-Dinitrotoluene	606-20-2	72	72%
Acenaphthylene	208-96-8	110	108%
4-Nitroaniline	99-09-2	NS	---
Acenaphthene	83-32-9	120	115%
Dibenzofuran	132-64-9	NS	---
2,4-Dinitrotoluene	121-14-2	73	73%
Diethylphthalate	84-66-2	68	68%
4-Chlorophenyl-phenylether	7005-72-3	110	110%
Fluorene	86-73-7	120	115%
4-Nitroaniline	100-01-6	NS	---
N-Nitrosodiphenylamine	86-30-6	110	110%
4-Bromophenyl-phenylether	101-55-3	100	100%
Hexachlorobenzene	118-74-1	96	96%
Phenanthrene	85-01-8	110	99%
Anthracene	120-12-7	100	97%
Di-n-Butylphthalate	84-74-2	100	100%
Fluoranthene	206-44-0	110	108%
Pyrene	129-00-0	100	99%
Butylbenzylphthalate	85-68-7	100	100%
3,3'-Dichlorobenzidine	91-94-1	U	0%
Benzo(a)Anthracene	56-55-3	110	110%
bis(2-Ethylhexyl) Phthalate	117-81-7	120	119%
Chrysene	218-01-9	100	100%
Di-n-Octyl Phthalate	117-84-0	150	150%
Benzo(b) Fluoranthene	205-99-2	110	110%
Benzo(k) Fluoranthene	207-08-9	110	110%
Benzo(a) Pyrene	50-32-8	100	100%
Indeno(1,2,3-cd) Pyrene	193-39-5	85	85%
Dibenz(a,h) Anthracene	53-70-3	85	85%
Benzo(g,h,i) Perylene	191-24-2	79	79%

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Semivolatile Analysis Data Report
Page 2

Client Sample Number	: MW-4 REF	Client I.D.	: 722450.26
Lab Sample Number	: X05926 REF		SEYMORE
Date Sampled	: 04/18/95	Lab Project No.	: 95-1264
Date Received	: 04/19/95	Effective Dilution	: 1.00
Date Extracted/Prepared	: 04/21/95	Method	: 625
Date Analyzed	: 04/25/95	Matrix	: WATER
		Lab File No.	: >28586
		Method Blank No.	: WB042195

ACIDS

Compound Name	Cas Number	Conc. ug/L	REC %
Phenol	108-95-2	68	66%
2-Chlorophenol	95-57-8	82	82%
Benzylalcohol	100-51-6	NS	---
2-Methylphenol	95-48-7	90	80%
4-Methylphenol	106-44-5	220	209%
2-Nitrophenol	88-75-5	NS	---
2,4-Dimethylphenol	105-67-9	120	120%
Benzoic Acid	65-85-0	NS	---
2,4-Dichlorophenol	120-83-2	110	110%
4-Chloro-3-Methylphenol	59-50-7	130	130%
2,4,6-Trichlorophenol	88-06-2	110	110%
2,4-Dinitrophenol	51-28-5	U	0%
4-Nitrophenol	100-02-7	27	27%
4,6-Dinitro-2-Methylphenol	534-52-1	U	0%
Pentachlorophenol	87-86-5	150	150%
2,4,5-Trichlorophenol	95-95-4	140	140%

Expected Surrogate Recoveries:

Nitrobenzene-d5	100
2-Fluorobiphenyl	100
Terphenyl-d14	100
Phenol-d6	200
2-Fluorophenol	200
2,4,6 Tribromophenol	200

Actual Recoveries:

ug/L	1%	X (35-107)
ug/L	68%	(45-105)
ug/L	49%	(33- 104)
ug/L	50%	(20- 94)
ug/L	60%	(22- 88)
ug/L	71%	(17- 90)

QC Limits

QUALIFIERS:

NS = Not spiked.

X = Surrogates not quantifiable due to matrix interferences.

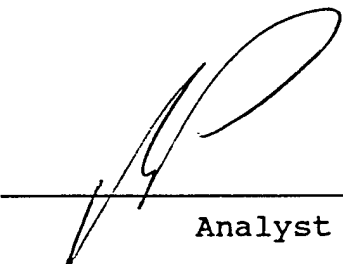
U = Compound analyzed for, but not detected above the reporting limits.

B = Compound found in blank and sample. Compare blank and sample data.

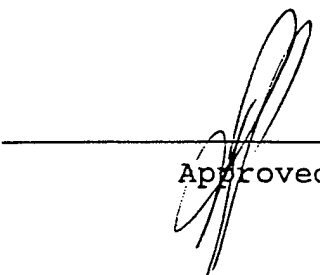
* = Reporting limits are roughly the method detection limits for reagent wa

E = Compound is detected but concentration is outside of calibration limits

Unless otherwise noted concentrations for soils are reported on a dry weight basis. (NA = not applicable or not available)



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Semivolatile Analysis Data Report
Page 1

Client Sample Number : DI REF
Lab Sample Number : DI REF
Date Sampled : NA
Date Received : NA
Date Extracted/Prepared : 04/21/95
Date Analyzed : 04/25/95

Client I.D. : 722450.2602 /
SEYMORE JOHNS
Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 625
Matrix : WATER
Lab File No. : >28587
Method Blank No. : WB042195

BASE/NEUTRALS

Compound Name	Cas Number	Conc. ug/L	REC %
bis(2-Chloroethyl) Ether	111-44-4	96	96%
1,3-Dichlorobenzene	541-73-1	80	80%
1,4-Dichlorobenzene	106-46-7	81	81%
1,2-Dichlorobenzene	95-50-1	82	82%
bis(2-chloroisopropyl) Ether	108-60-1	96	96%
N-Nitroso-Di-n-Propylamine	621-64-7	110	110%
Hexachloroethane	67-72-1	77	77%
Nitrobenzene	98-95-3	190	190%
Isophorone	78-59-1	26	26%
bis(2-Chloroethoxy) Methane	111-91-1	110	110%
1,2,4-Trichlorobenzene	120-82-1	88	88%
Naphthalene	91-20-3	90	90%
4-Chloroaniline	106-47-8	NS	---
Hexachlorobutadiene	87-68-3	84	84%
2-Methylnaphthalene	91-57-6	NS	---
Hexachlorocyclopentadiene	77-47-4	42	42%
2-Chloronaphthalene	91-58-7	95	95%
2-Nitroaniline	88-74-4	NS	---
Dimethylphthalate	131-11-3	8	8%
2,6-Dinitrotoluene	606-20-2	100	100%
Acenaphthylene	208-96-8	96	96%
-Nitroaniline	99-09-2	NS	---
Acenaphthene	83-32-9	96	96%
Dibenzofuran	132-64-9	NS	---
2,4-Dinitrotoluene	121-14-2	96	96%
Diethylphthalate	84-66-2	51	51%
4-Chlorophenyl-phenylether	7005-72-3	97	97%
Fluorene	86-73-7	100	100%
4-Nitroaniline	100-01-6	NS	---
N-Nitrosodiphenylamine	86-30-6	100	100%
4-Bromophenyl-phenylether	101-55-3	99	99%
Hexachlorobenzene	118-74-1	92	92%
Phenanthrene	85-01-8	98	98%
Anthracene	120-12-7	98	98%
Di-n-Butylphthalate	84-74-2	98	98%
Fluoranthene	206-44-0	100	100%
Pyrene	129-00-0	93	93%
Butylbenzylphthalate	85-68-7	98	98%
3,3'-Dichlorobenzidine	91-94-1	110	110%
Benzo(a)Anthracene	56-55-3	97	97%
bis(2-Ethylhexyl) Phthalate	117-81-7	110	110%
Chrysene	218-01-9	96	96%
Di-n-Octyl Phthalate	117-84-0	130	130%
Benzo(b) Fluoranthene	205-99-2	110	110%
Benzo(k) Fluoranthene	207-08-9	100	100%
Benzo(a) Pyrene	50-32-8	97	97%
Indeno(1,2,3-cd) Pyrene	193-39-5	81	81%
Dibenz(a,h) Anthracene	53-70-3	80	80%
Benzo(g,h,i) Perylene	191-24-2	76	76%

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Semivolatiles Analysis Data Report
Page 2

Client Sample Number : DI REF
Lab Sample Number : DI REF
Date Sampled : NA
Date Received : NA
Date Extracted/Prepared : 04/21/95
Date Analyzed : 04/25/95

Client I.D. : 722450.26
SEYMORE JOHN
Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 625
Matrix : WATER
Lab File No. : >28587
Method Blank No. : WB042195

ACIDS

Compound Name	Cas Number	Conc. ug/L	REC %
Phenol	108-95-2	120	120%
2-Chlorophenol	95-57-8	110	110%
Benzylalcohol	100-51-6	NS	---
2-Methylphenol	95-48-7	120	120%
4-Methylphenol	106-44-5	190	190%
2-Nitrophenol	88-75-5	NS	---
2,4-Dimethylphenol	105-67-9	110	110%
Benzoic Acid	65-85-0	NS	---
2,4-Dichlorophenol	120-83-2	120	120%
4-Chloro-3-Methylphenol	59-50-7	130	130%
2,4,6-Trichlorophenol	88-06-2	120	120%
2,4-Dinitrophenol	51-28-5	88	88%
4-Nitrophenol	100-02-7	160	160%
4,6-Dinitro-2-Methylphenol	534-52-1	110	110%
Pentachlorophenol	87-86-5	70	70%
2,4,5-Trichlorophenol	95-95-4	120	120%

Expected Surrogate Recoveries:

Nitrobenzene-d5	100
2-Fluorobiphenyl	100
Terphenyl-d14	100
Phenol-d6	200
2-Fluorophenol	200
2,4,6 Tribromophenol	200

Actual Recoveries:

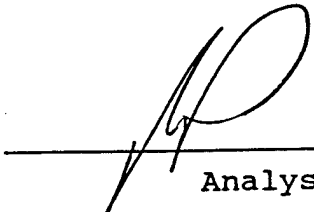
ug/L	72%
ug/L	63%
ug/L	64%
ug/L	74%
ug/L	62%
ug/L	62%

QC Limits

(35-107)
(45-105)
(33-104)
(20-94)
(22-88)
(17-90)

QUALIFIERS:

NS = Not spiked.
U = Compound analyzed for, but not detected above the reporting limits.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent wa
E = Compound is detected but concentration is outside of calibration limits
Unless otherwise noted concentrations for soils are reported on a
dry weight basis. (NA = not applicable or not available)



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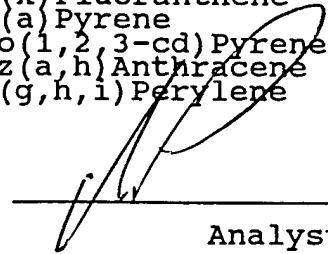
EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303)425-6021
Semivolatile Analysis Data Report
Method Blank Report
Page 1

Method Blank Number : WB042195
Date Extracted/Prepared : 04/21/95
Date Analyzed : 04/25/95

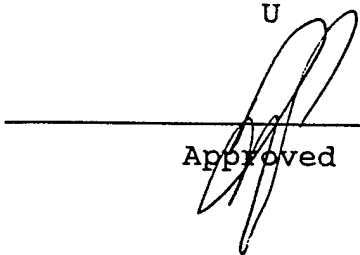
Client I.D. : 722450.2602 /
SEYMORE JOHNS
Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 625
Matrix : WATER
Lab File No. : >28584

BASE/NEUTRALS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
bis(2-Chloroethyl) Ether	111-44-4	U	1.0
1,3-Dichlorobenzene	541-73-1	U	0.5
1,4-Dichlorobenzene	106-46-7	U	0.5
1,2-Dichlorobenzene	95-50-1	U	0.5
bis(2-chloroisopropyl) Ether	108-60-1	U	1.0
N-Nitroso-Di-n-Propylamine	621-64-7	U	1.0
Hexachloroethane	67-72-1	U	0.5
Nitrobenzene	98-95-3	U	1.0
Isophorone	78-59-1	U	1.0
bis(2-Chloroethoxy) Methane	111-91-1	U	1.0
1,2,4-Trichlorobenzene	120-82-1	U	0.5
Naphthalene	91-20-3	U	0.5
4-Chloroaniline	106-47-8	U	2.0
Hexachlorobutadiene	87-68-3	U	0.5
2-Methylnaphthalene	91-57-6	1	0.5
Hexachlorocyclopentadiene	77-47-4	U	2.0
2-Chloronaphthalene	91-58-7	U	0.5
2-Nitroaniline	88-74-4	U	0.5
Dimethylphthalate	131-11-3	U	0.5
2,6-Dinitrotoluene	606-20-2	U	2.0
Acenaphthylene	208-96-8	U	0.5
-Nitroaniline	99-09-2	U	0.5
Acenaphthene	83-32-9	U	0.5
Dibenzofuran	132-64-9	U	0.5
2,4-Dinitrotoluene	121-14-2	U	2.0
Diethylphthalate	84-66-2	U	0.5
4-Chlorophenyl-phenylether	7005-72-3	U	0.5
Fluorene	86-73-7	U	0.5
4-Nitroaniline	100-01-6	U	2.0
N-Nitrosodiphenylamine	86-30-6	U	0.5
4-Bromophenyl-phenylether	101-55-3	U	0.5
Hexachlorobenzene	118-74-1	U	0.5
Phenanthrene	85-01-8	U	0.5
Anthracene	120-12-7	U	0.5
Di-n-Butylphthalate	84-74-2	1	0.5
Fluoranthene	206-44-0	U	0.5
Pyrene	129-00-0	U	0.5
Butylbenzylphthalate	85-68-7	U	0.5
3,3'-Dichlorobenzidine	91-94-1	U	2.0
Benzo(a)Anthracene	56-55-3	U	0.5
bis(2-Ethylhexyl) Phthalate	117-81-7	1	0.5
Chrysene	218-01-9	U	0.5
Di-n-Octyl Phthalate	117-84-0	U	0.5
Benzo(b) Fluoranthene	205-99-2	U	0.5
Benzo(k) Fluoranthene	207-08-9	U	0.5
Benzo(a) Pyrene	50-32-8	U	0.5
Indeno(1,2,3-cd) Pyrene	193-39-5	U	0.5
Dibenz(a,h) Anthracene	53-70-3	U	0.5
Benzo(g,h,i) Perylene	191-24-2	U	0.5



Analyst



Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield Wheat Ridge CO 80033
(303) 425-6021

Method Blank Report
Page 2

Method Blank Number : WB042195
Date Extracted/Prepared : 04/21/95
Date Analyzed : 04/25/95

Client I.D. : 722450.2602
SEYMORE JOH
Lab Project No. : 95-1264
Effective Dilution : 1.00
Method : 625
Matrix : WATER
Lab File No. : >28584

ACIDS

Compound Name	Cas Number	Conc. ug/L	Reporting Limit* ug/L
Phenol	108-95-2	U	2.0
2-Chlorophenol	95-57-8	U	2.0
Benzylalcohol	100-51-6	U	5.0
2-Methylphenol	95-48-7	U	1.0
4-Methylphenol	106-44-5	U	1.0
2-Nitrophenol	88-75-5	U	2.0
2,4-Dimethylphenol	105-67-9	U	2.0
Benzoic Acid	65-85-0	U	5.0
2,4-Dichlorophenol	120-83-2	U	2.0
4-Chloro-3-Methylphenol	59-50-7	U	2.0
2,4,6-Trichlorophenol	88-06-2	U	2.0
2,4-Dinitrophenol	51-28-5	U	10.0
4-Nitrophenol	100-02-7	U	5.0
4,6-Dinitro-2-Methylphenol	534-52-1	U	10.0
Pentachlorophenol	87-86-5	U	5.0
2,4,5-Trichlorophenol	95-95-4	U	2.0

Expected Surrogate Recoveries:

Nitrobenzene-d5 100
2-Fluorobiphenyl 100
Terphenyl-d14 100
Phenol-d6 200
2-Fluorophenol 200
2,4,6 Tribromophenol 200

Actual Recoveries:

ug/L
ug/L
ug/L
ug/L
ug/L
ug/L

69%
62%
61%
76%
59%
55%

QC Limit

(35-107)
(45-105)
(33-104)
(20-94)
(22-88)
(17-90)

QUALIFIERS:

U = Compound analyzed for, but not detected above the reporting limits.
B = Compound found in blank and sample. Compare blank and sample data.
* = Reporting limits are roughly the method detection limits for reagent w.
E = Compound is detected but concentration is outside of calibration limit.
Unless otherwise noted concentrations for soils are reported on a
dry weight basis. (NA = not applicable or not available)

Analyst

Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH-GASOLINE)

Date Sampled	: 4/18/95	Client Project Number	: 722450.2602
Date Received	: 4/19/95	Lab Project Number	: 95-1264
Date Prepared	: 5/1,2/95	Matrix	: Water
Date Analyzed	: 5/1,2/95	Method Number	: EPA 5030/8015 Modified

<u>Evergreen Sample #</u>	<u>Client Sample #</u>	<u>Surrogate Recovery</u>	<u>TVH mg/L</u>	<u>RL mg/L</u>
MB050195	METHOD BLANK	100%	U	0.1
X05922	CPT-17	103%	1.8	0.1
X05923	CPT-18	116%	2.8	0.1
X05925	CPT-19	95%	U	0.1
X05926	MW-4	109%	17	0.5
X05927	MW-4 DUP	106%	17	0.5
X05928	MW-12D	102%	0.2	0.1
X05931	MW-5	103%	1.0	0.1
X05931 DUP	MW-5	102%	1.1	0.1
X05932	MW-8	107%	2.4	0.1
X05933	MW-3	108%	3.2	0.1


QUALIFIERS

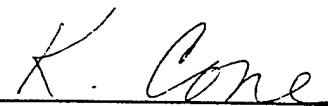
U = TVH analyzed for but not detected.

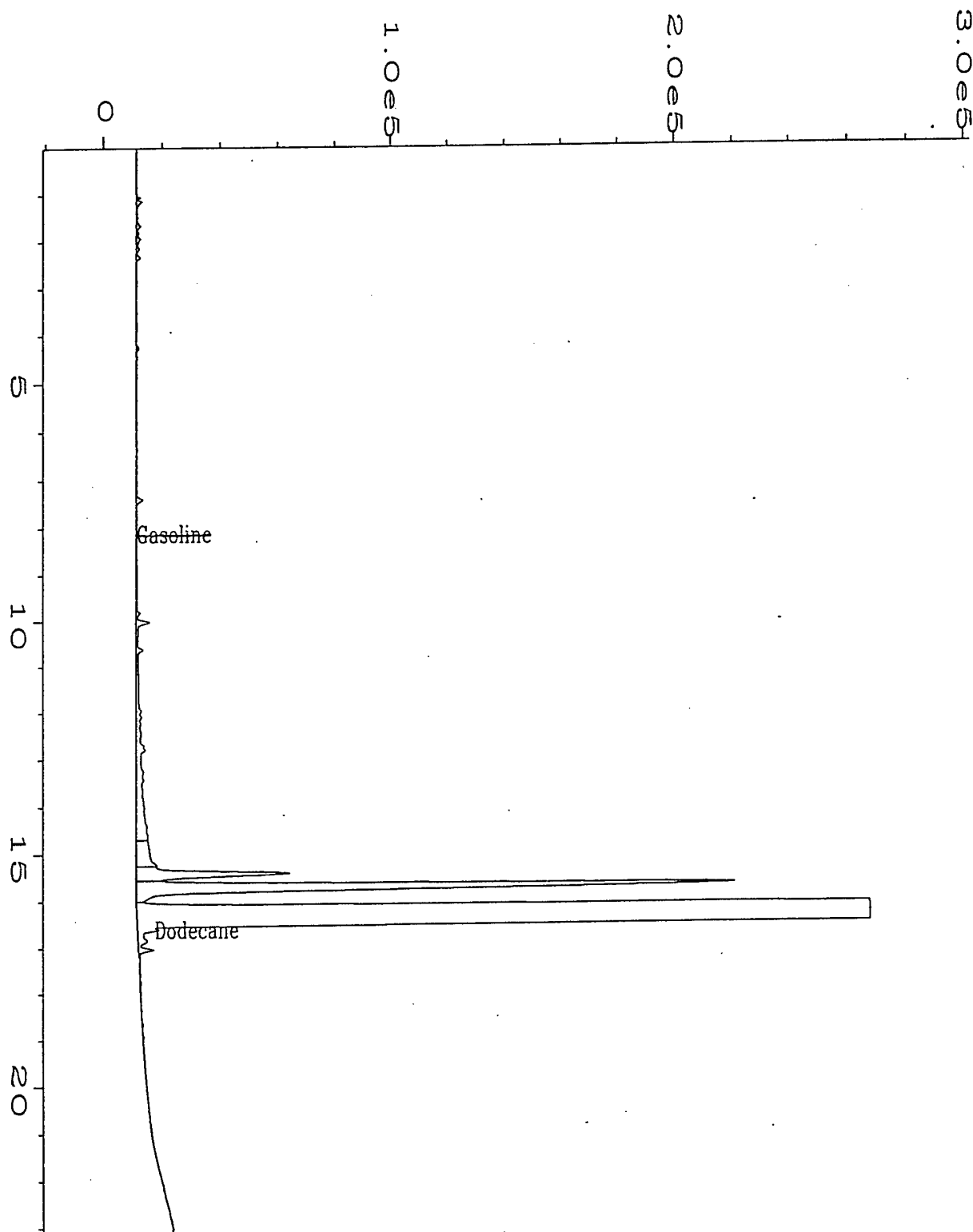
B = TVH found in blank also.

E = Extrapolated value.

RL = Reporting Limit.

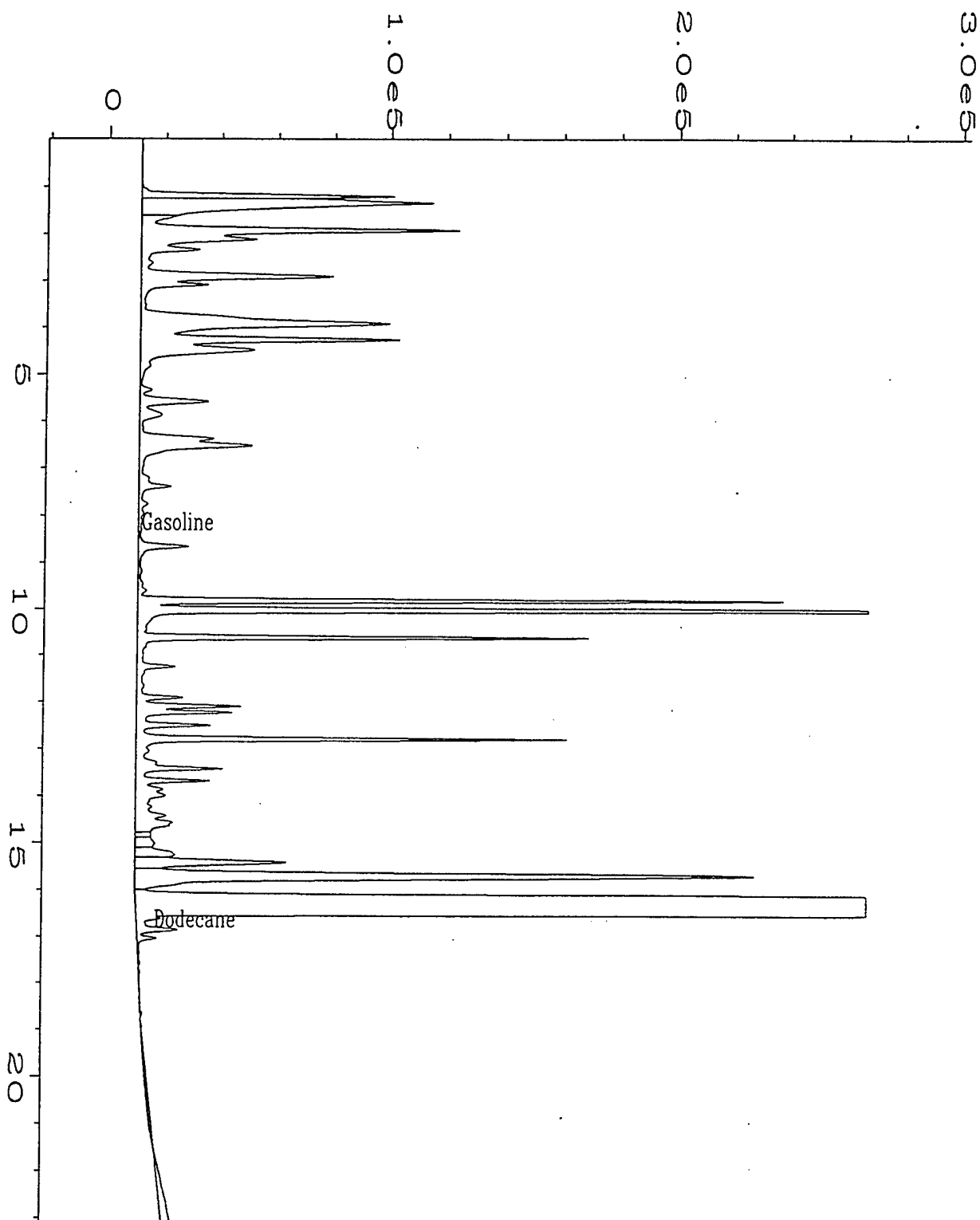

Analyst


Approved



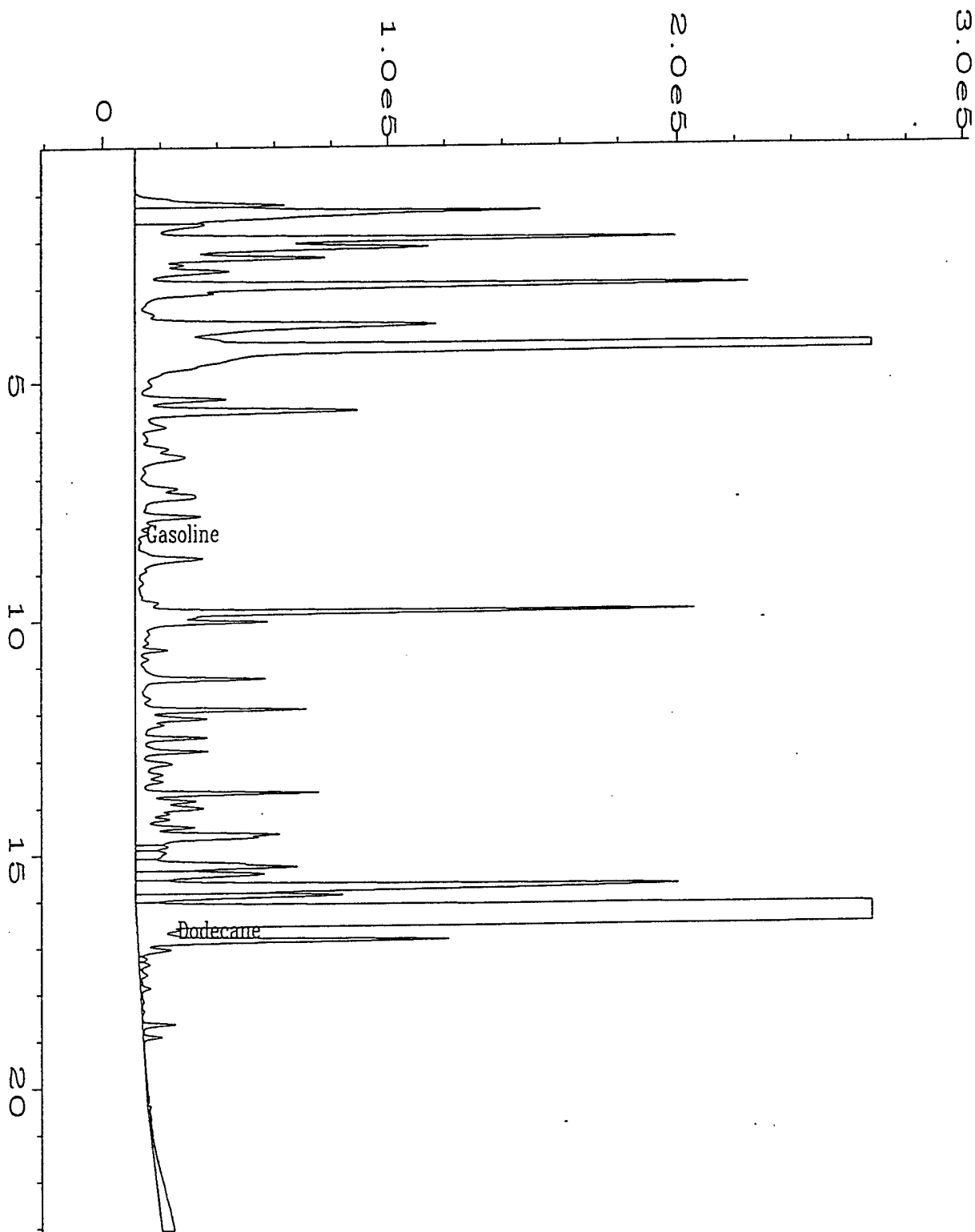
Data File Name	: C:\HPCHEM\1\DATA\TVH0501\008F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 8
Instrument	: TVH	Injection Number	: 1
Sample Name	: MB050195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BAS
Printed on	: 01 May 95 07:19 PM	Analysis Method	: TVH0501.M
Report Created on:	01 May 95 07:46 PM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

pm 5/11/95



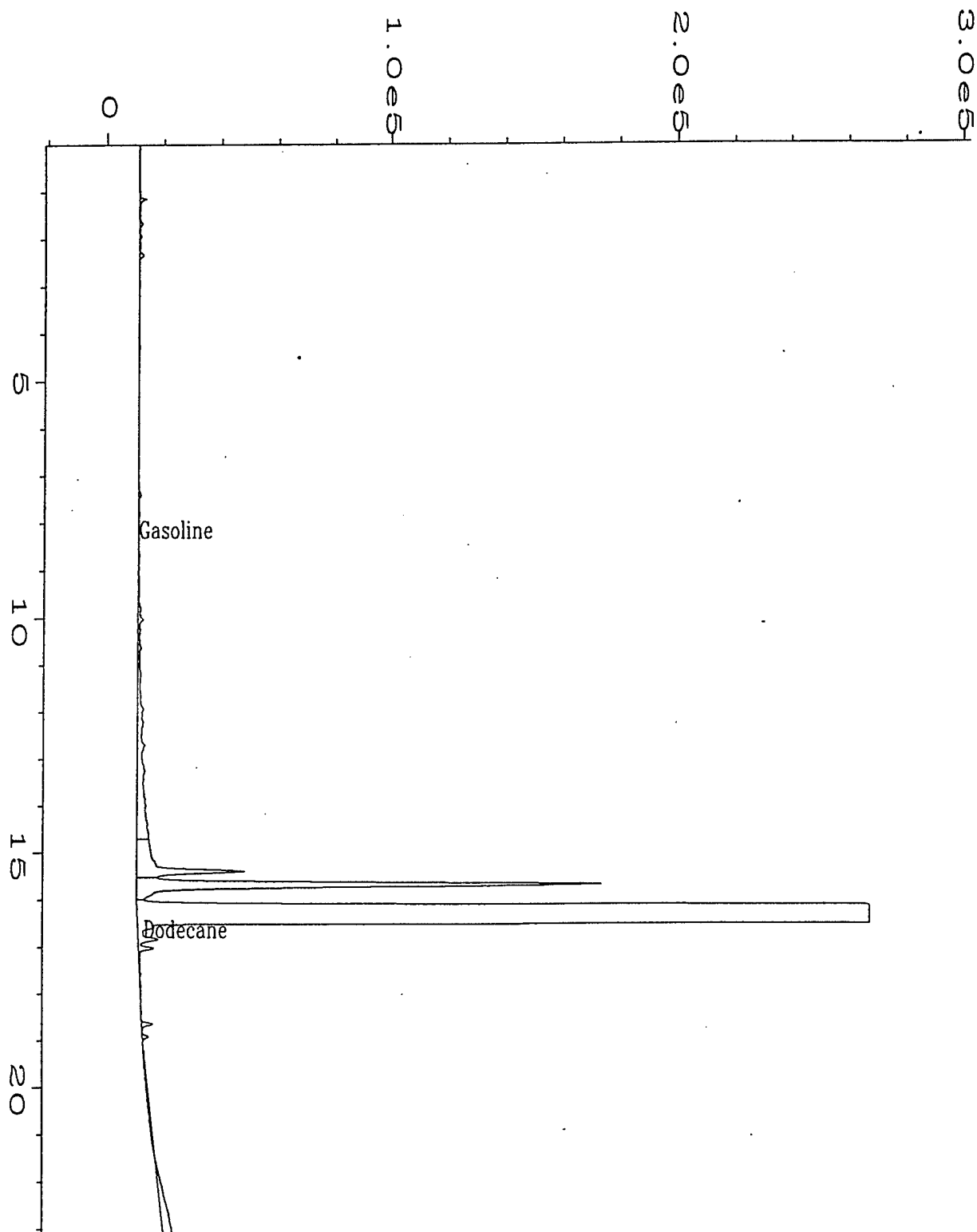
Data File Name	: C:\HPCHEM\1\DATA\TVH0501\013F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 13
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05922;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 01 May 95 10:13 PM	Analysis Method	: TVH0501.MTH
Report Created on	: 02 May 95 07:57 AM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

CPT-17



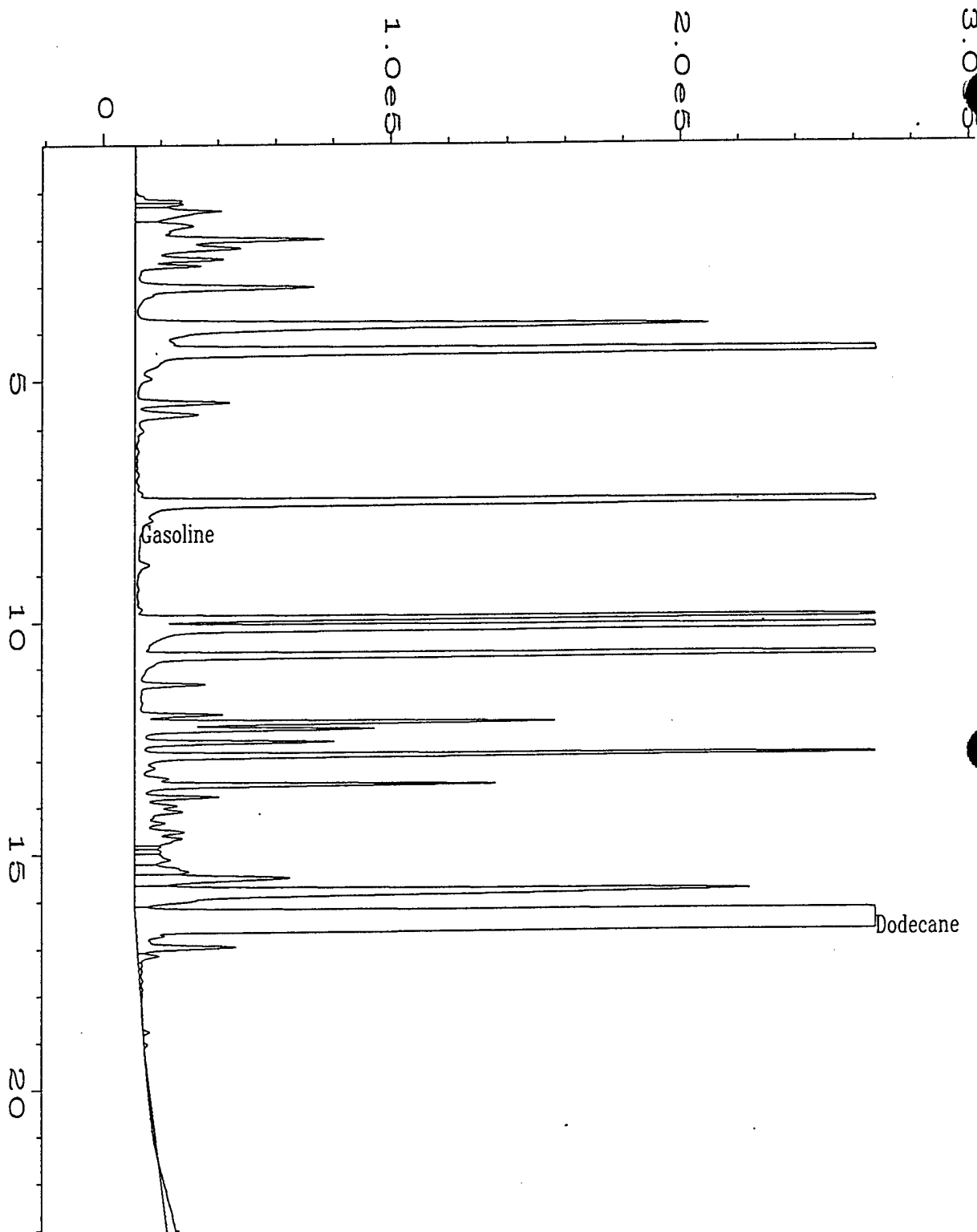
Data File Name	: C:\HPCHEM\1\DATA\TVH0501\014F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 14
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05923;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BA
quired on	: 01 May 95 10:48 PM	Analysis Method	: TVH050
Report Created on:	02 May 95 07:58 AM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

CPT-18

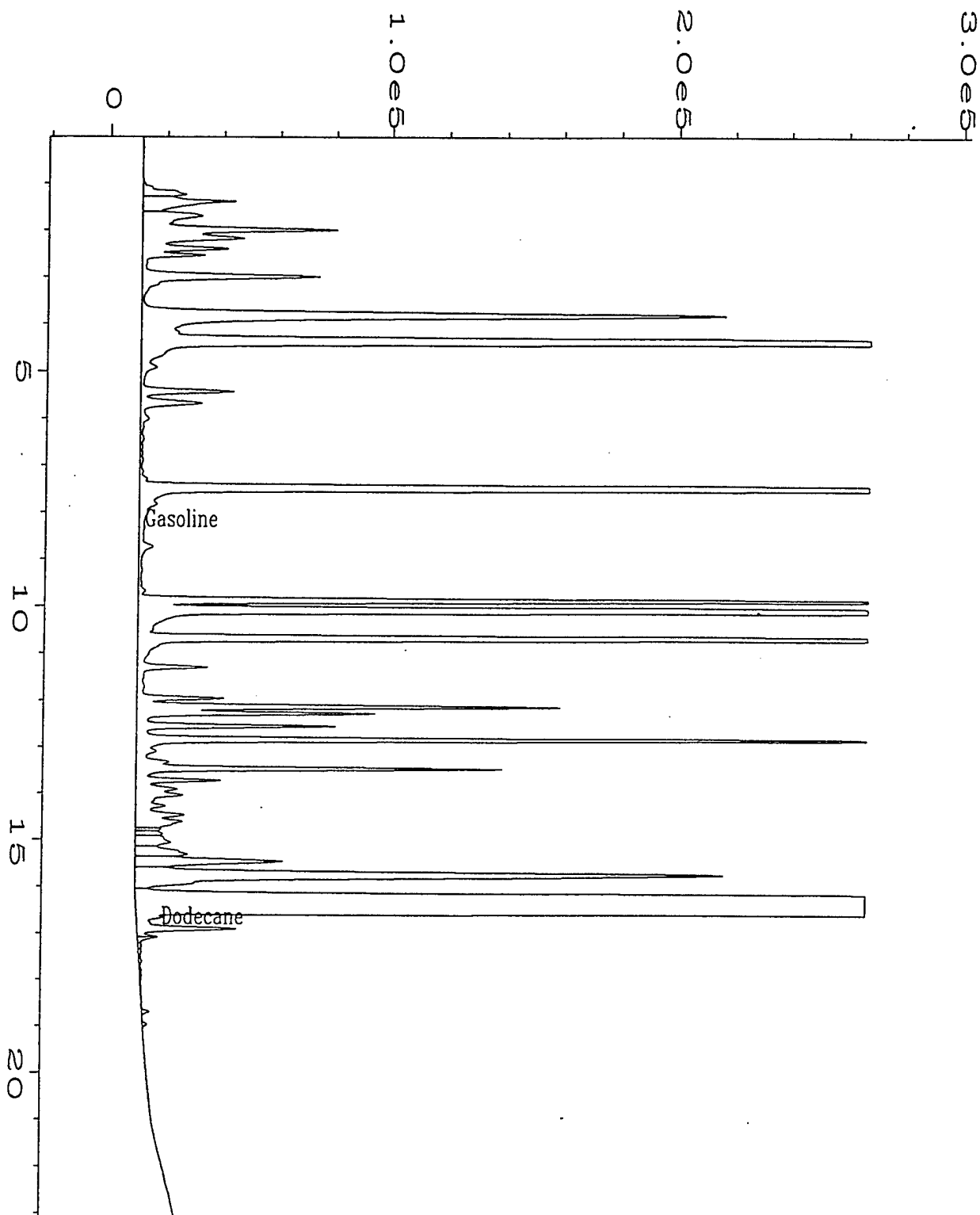


Data File Name	: C:\HPCHEM\1\DATA\TVH0501\015F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 15
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05925;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MTH
Printed on	: 01 May 95 11:23 PM	Analysis Method	: TVH0501.MTH
Report Created on:	02 May 95 07:59 AM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

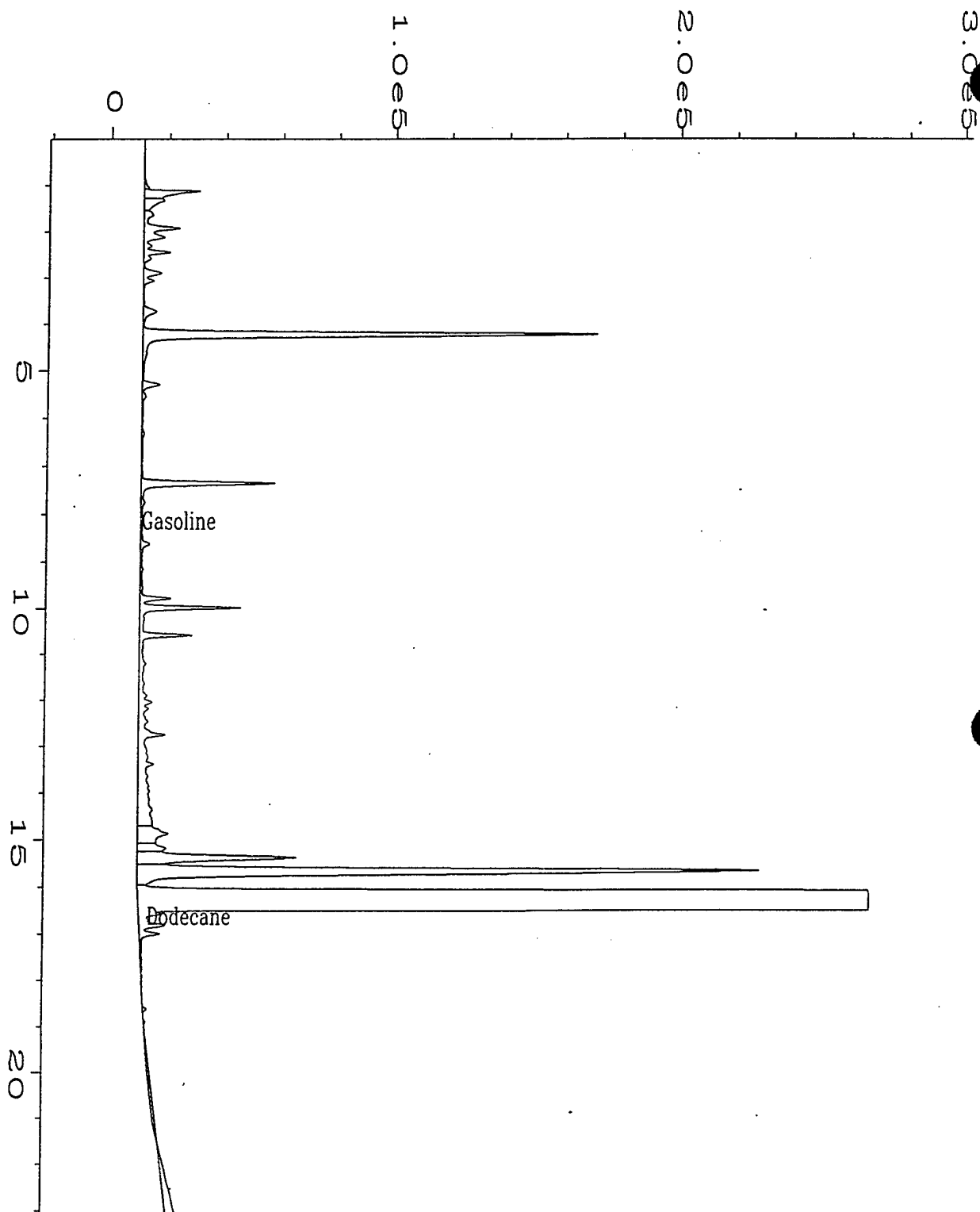
CPT-19



Data File Name	: C:\HPCHEM\1\DATA\tvh0501\038F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 38
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05926;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BZ
quired on	: 02 May 95 02:02 PM	Analysis Method	: TVH05
Report Created on:	02 May 95 03:02 PM	Sample Amount	: 0
Last Recalib on	: 01 MAY 95 05:39 PM	ISTD Amount	:
Multiplier	: 5		
Sample Info	: 95-1264;MW-4;1 ml water		

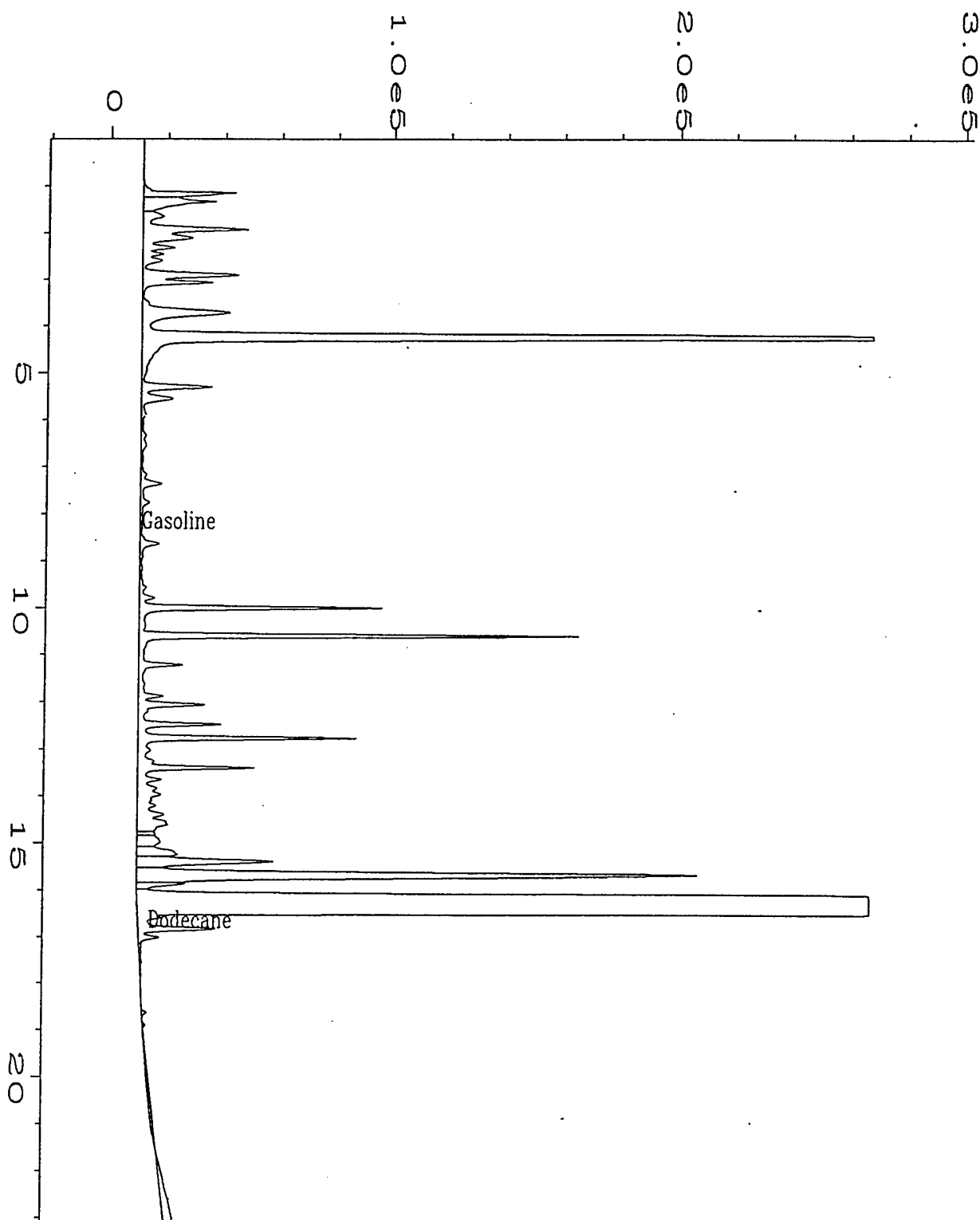


Data File Name	: C:\HPCHEM\1\DATA\tvh0501\039F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 39
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05927;5	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 02 May 95 02:37 PM	Analysis Method	: TVH0501.MTH
Report Created on	: 02 May 95 03:02 PM	Sample Amount	: 0
Last Recalib on	: 01 MAY 95 05:39 PM	ISTD Amount	:
Multiplier	: 5		
Sample Info	: 95-1264;MW-4 Dupe; 1 ml water		



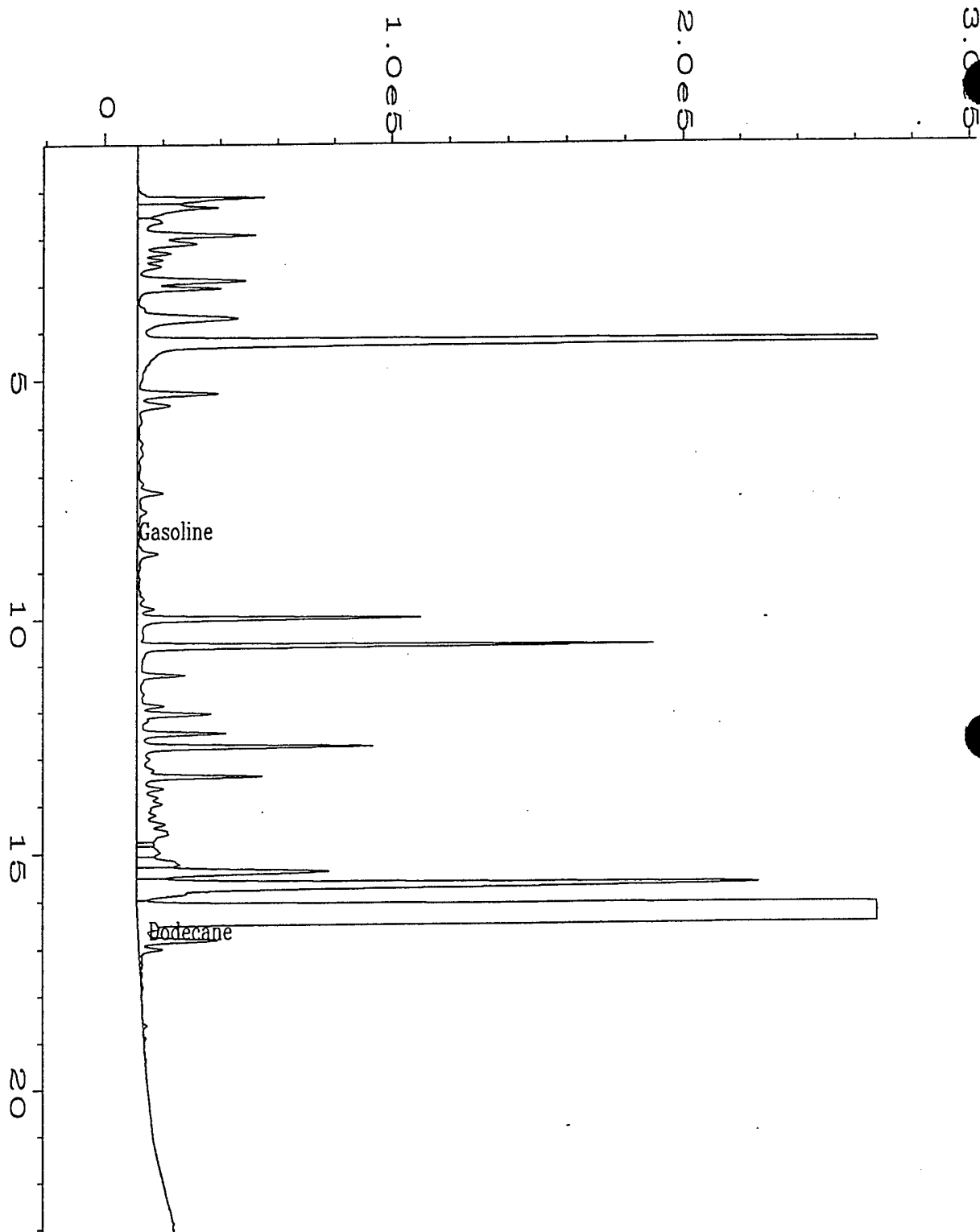
Data File Name	: C:\HPCHEM\1\DATA\TVH0501\019F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 19
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05928;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BA.M
Acquired on	: 02 May 95 01:43 AM	Analysis Method	: TVH0501.MT
Report Created on:	02 May 95 08:02 AM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

MW-12D



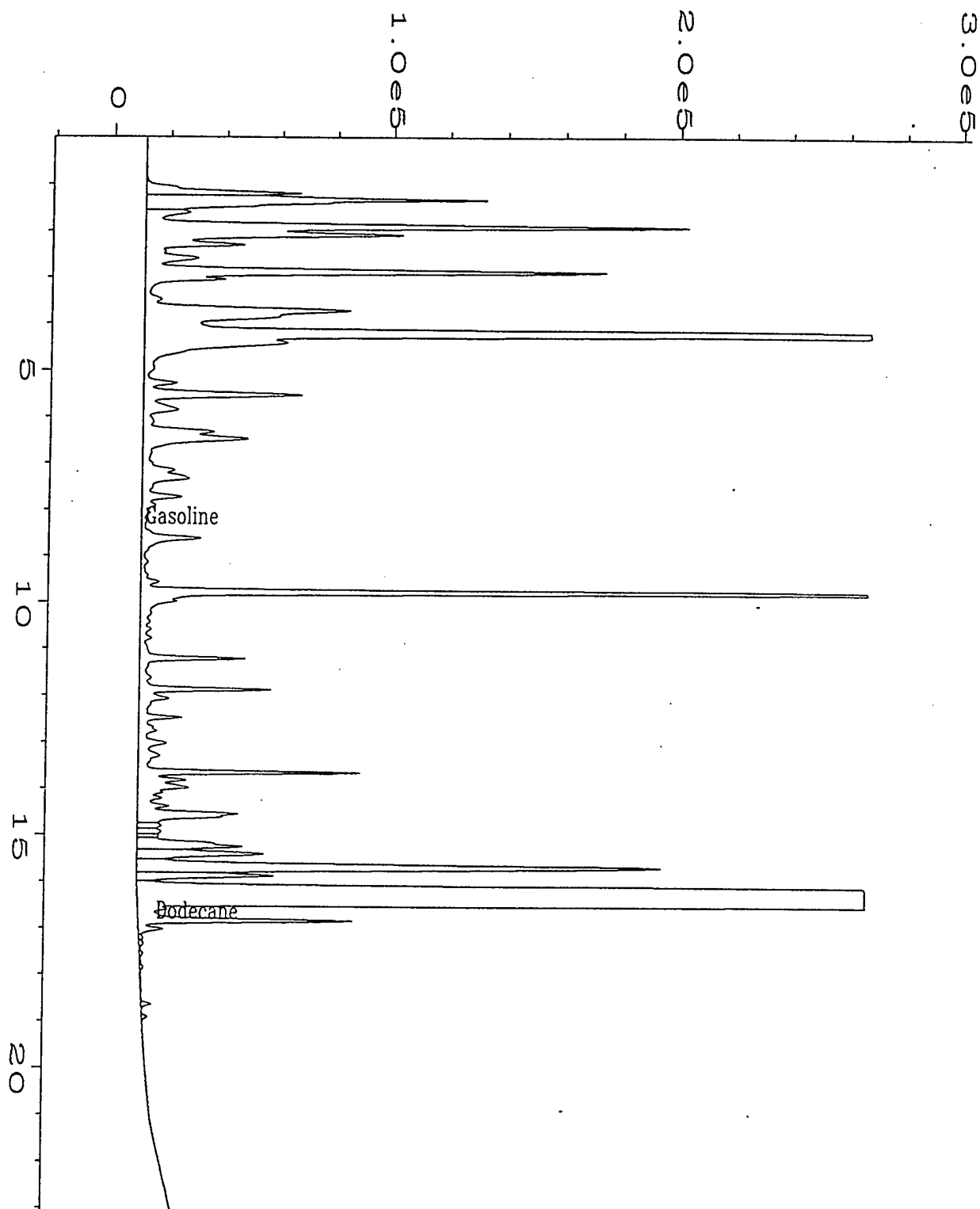
Data File Name	: C:\HPCHEM\1\DATA\TVH0501\020F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 20
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05931;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Printed on	: 02 May 95 02:18 AM	Analysis Method	: TVH0501.MTH
Report Created on:	02 May 95 08:03 AM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

MW-5



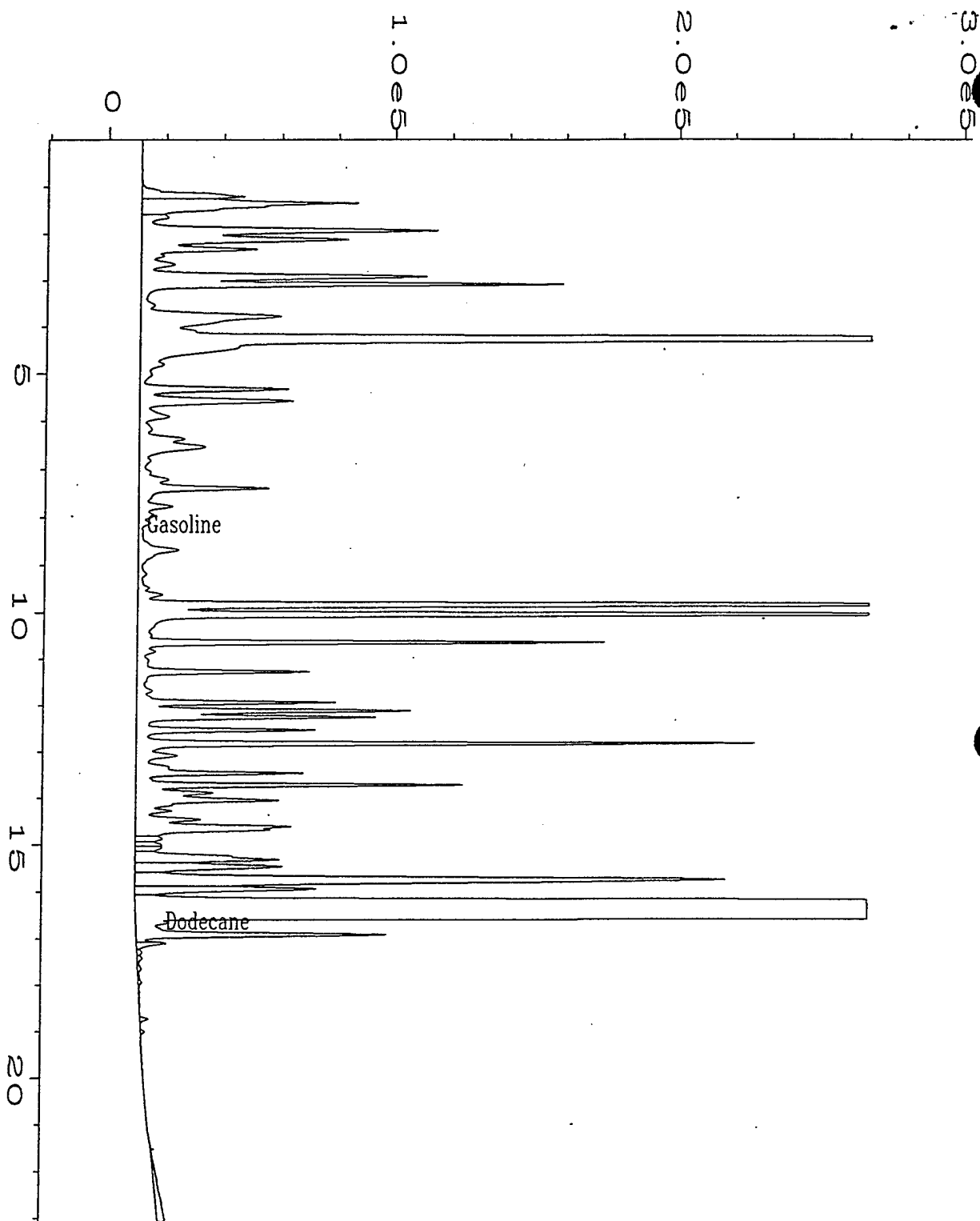
Data File Name	: C:\HPCHEM\1\DATA\TVH0501\021F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 21
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05931Dup;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1B.1
quired on	: 02 May 95 02:53 AM	Analysis Method	: TVH0501.M
Report Created on:	02 May 95 08:03 AM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

MW-5



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\024F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 24
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05932;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 02 May 95 04:38 AM	Analysis Method	: TVH0501.MTH
Report Created on	: 02 May 95 08:05 AM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

mw-8



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\026F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 26
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05933;1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BAS.MT
Acquired on	: 02 May 95 05:48 AM	Analysis Method	: TVH0501.MT
Report Created on:	: 02 May 95 07:45 AM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

MW-3

Evergreen Analytical, Inc.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
TVH Matrix Spike/Matrix Spike Duplicate Data Report

Client Sample No.	: MW-5	Client Project No.	: 722450.2602
Lab Sample No.	: X05931	Lab Project No.	: 95-1264
Date Sampled	: 4/18/95	EPA Method No.	: 5030/8015 Modified
Date Received	: 4/19/95	Matrix	: Water
Date Prepared	: 5/1/95	Method Blank	: MB050195
Date Analyzed	: 5/2/95		

Compound	Spike Added (mg/L)	Sample Concentration (mg/L)	MS Concentration (mg/L)	MS %REC	QC Limits %REC
Gasoline	2.00	1.12	2.99	94%	60-140

Compound	Spike Added (mg/L)	MSD Concentration (mg/L)	MSD %REC	RPD	QC Limits	
					RPD	%REC
Gasoline	2.00	3.30	109%	15	50	60-140

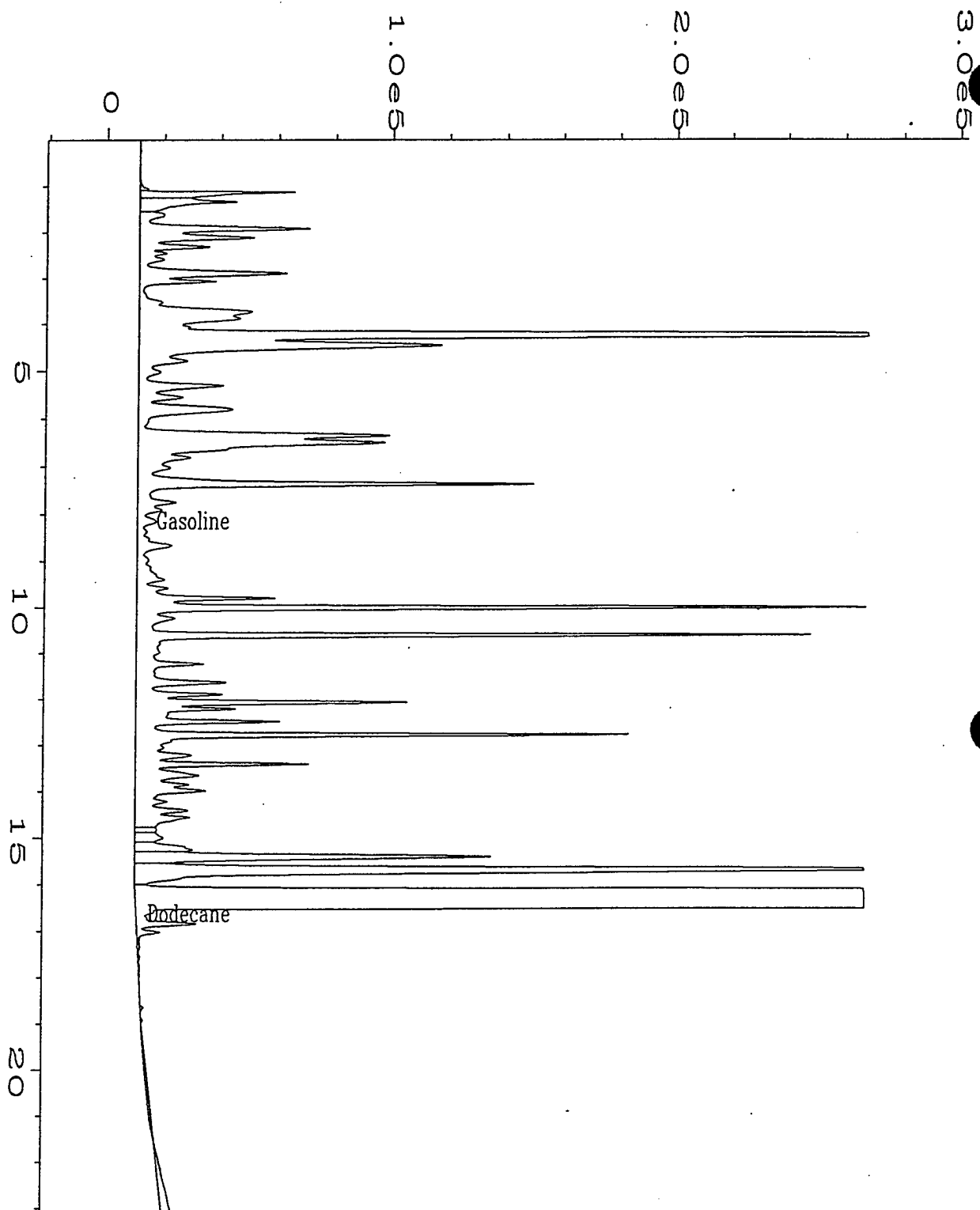
* = Values outside of QC limits.

RPD: 0 out of (1) outside limits.
Spike Recovery: 0 out of (2) outside limits.

NA = Not analyzed/not applicable.

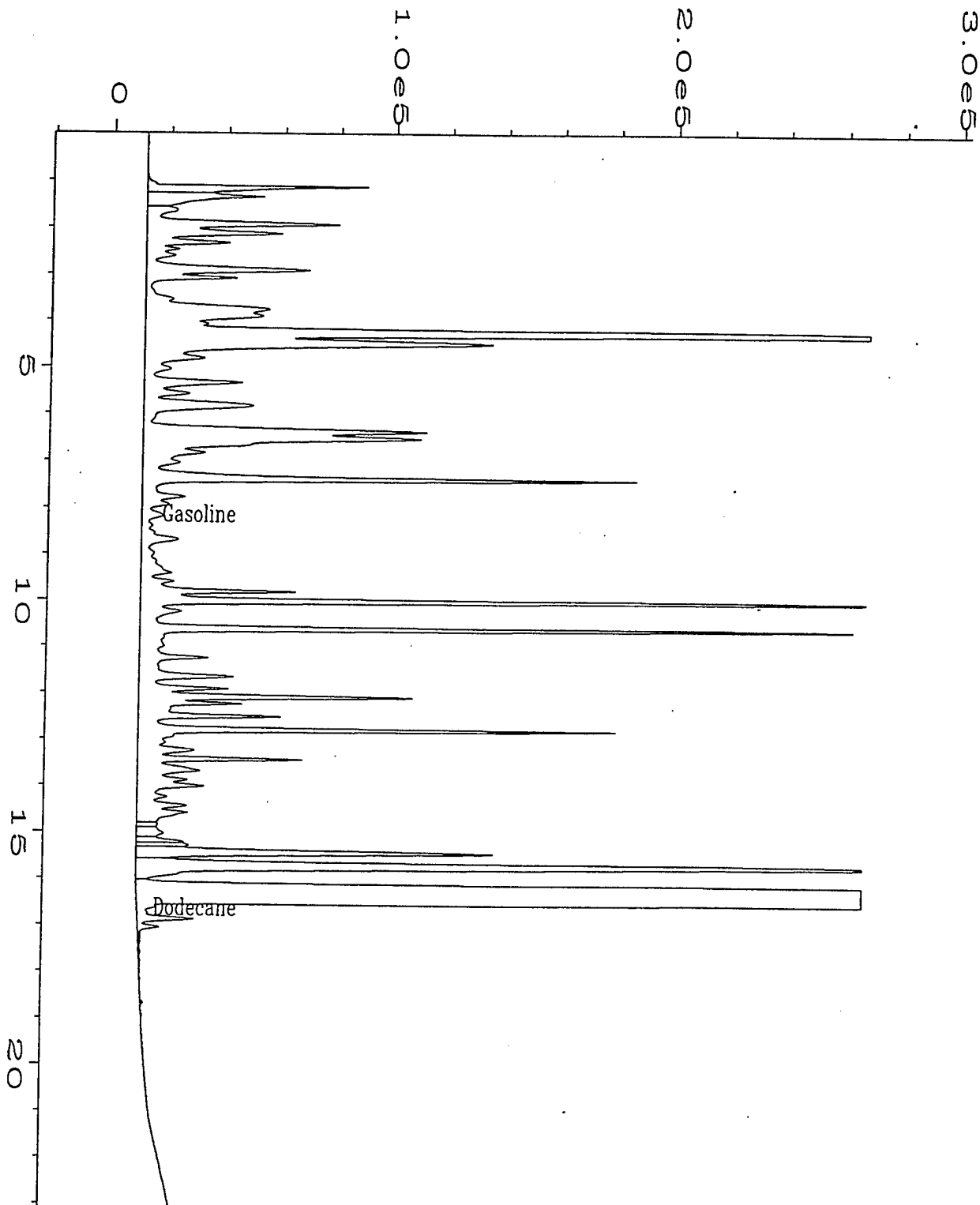
Comments:

K. Bone



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\022F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 22
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05931MS	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BAS.MT
Acquired on	: 02 May 95 03:28 AM	Analysis Method	: TVH0501.MT
Report Created on:	02 May 95 08:04 AM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

MWS MS



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\023F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 23
Instrument	: TVH	Injection Number	: 1
Sample Name	: X05931MSD	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TVH1BASE.MTH
Acquired on	: 02 May 95 04:03 AM	Analysis Method	: TVH0501.MTH
Report Created on	: 02 May 95 08:04 AM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

MW 5 MSD

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

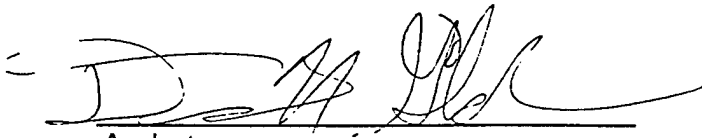
TOTAL VOLATILE HYDROCARBONS (TVH as Gasoline)
Laboratory Control Sample (LCS)

LCS Number : LCS050195 Matrix : WATER
Date Prepared : 5/1/95 Method Numbers : EPA 5030/8015 Modified
Date Analyzed : 5/1/95
Sequence Number : TVH7

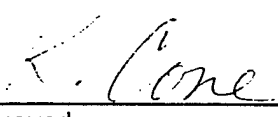
<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
Gasoline	5.00	5.11	102%	70%-130%

QUALIFIERS

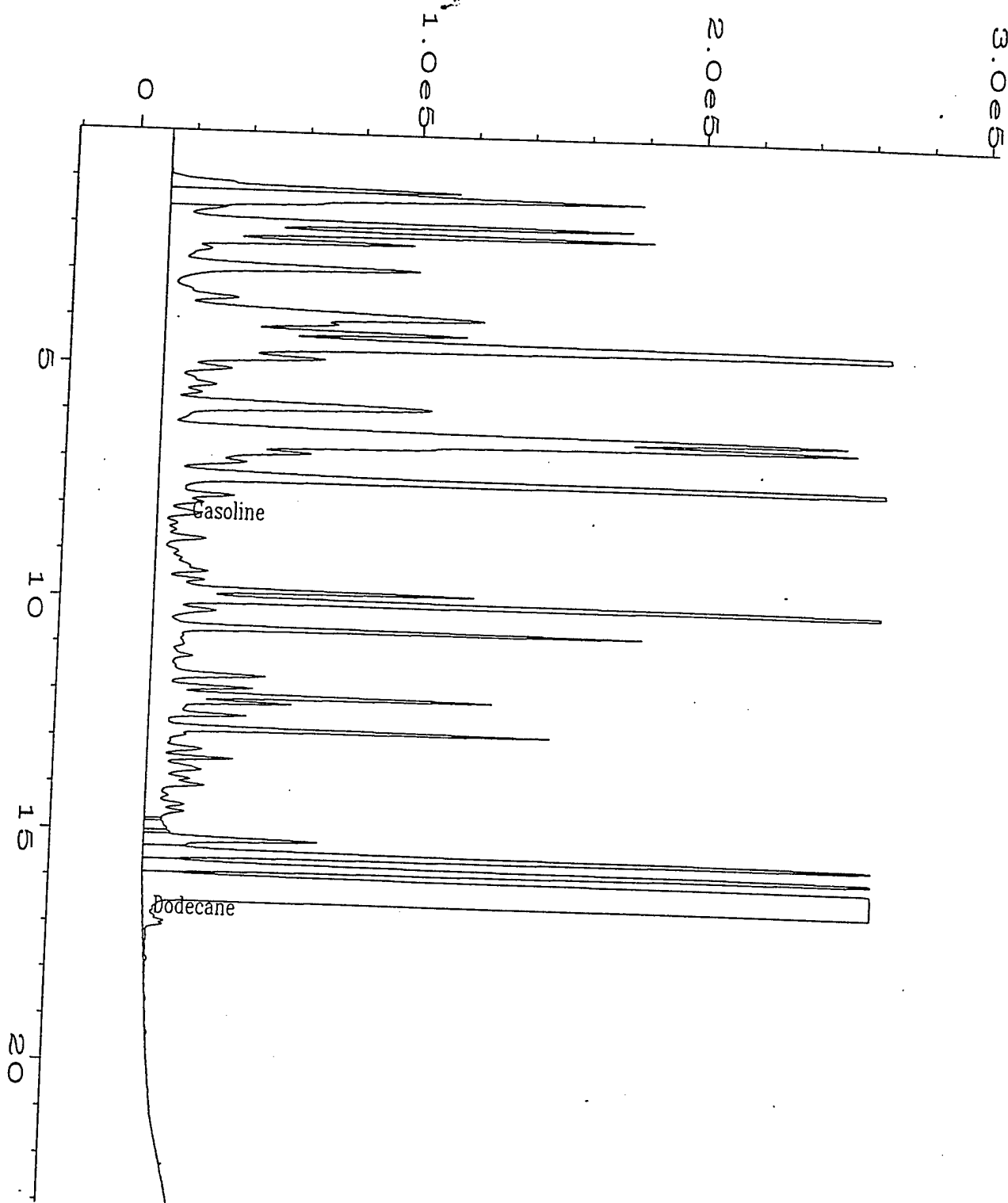
U = TVH analyzed for but not detected.
B = TVH as Gasoline found in blank also.
E = Extrapolated value.
NA = Not Available/Not Applicable.



Analyst



Approved



Data File Name	: C:\HPCHEM\1\DATA\TVH0501\007F0101.D	Page Number	: 1
Operator	: S.W. Tyson	Vial Number	: 7
Instrument	: TVH	Injection Number	: 1
Sample Name	: LCS050195	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TVH1BASE.MTH
Created on	: 01 May 95 06:44 PM	Analysis Method	: TVH0501.MTH
Print Created on:	01 May 95 07:08 PM	Sample Amount	: 0
Last Recalib on	: 01 May 95 05:39 PM	ISTD Amount	:
Multiplier	: 1		

EVERGREEN ANALYTICAL, INC.
4036 Youngfield, Wheat Ridge, CO 80033
(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS
JET FUEL

Date Sampled	: 4/18/95	Client Project Number	: 722450.2602
Date Received	: 4/19/95	Lab Project Number	: 95-1264
Date Prepared	: 4/20/95	Matrix	: Water
Date Analyzed	: 4/21/95	Method Number	: 3500/Mod.8015

Evergreen Sample #	Client Sample #	Surrogate Recovery	TEH mg/L	RL mg/L
WB042095	WATER METHOD BLANK	89%	U	0.5
X05922	CPT-17	61%	1.3	0.5
X05922-R	CPT-17	60%	1.2	0.5
X05923	CPT-18	81%	1.8	0.5
X05925	CPT-19	82%	U	0.5
X05926	MW-4	109%	8.2	0.5
X05927	MW-4 DUP	106%	7.3	0.5
X05928	MW-12D	75%	U	0.5
X05931	MW-5	76%	1.4	0.5
X05932	MW-8	45%	2.5	0.5
X05932-R	MW-8	43%	2.4	0.5
X05933	MW-3	46%	2.6	0.5
X05933-R	MW-3	68%	2.8	0.5

R = Second run.


QUALIFIERS

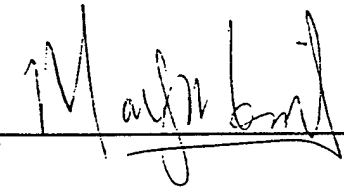
U = TEH analyzed for but not detected.

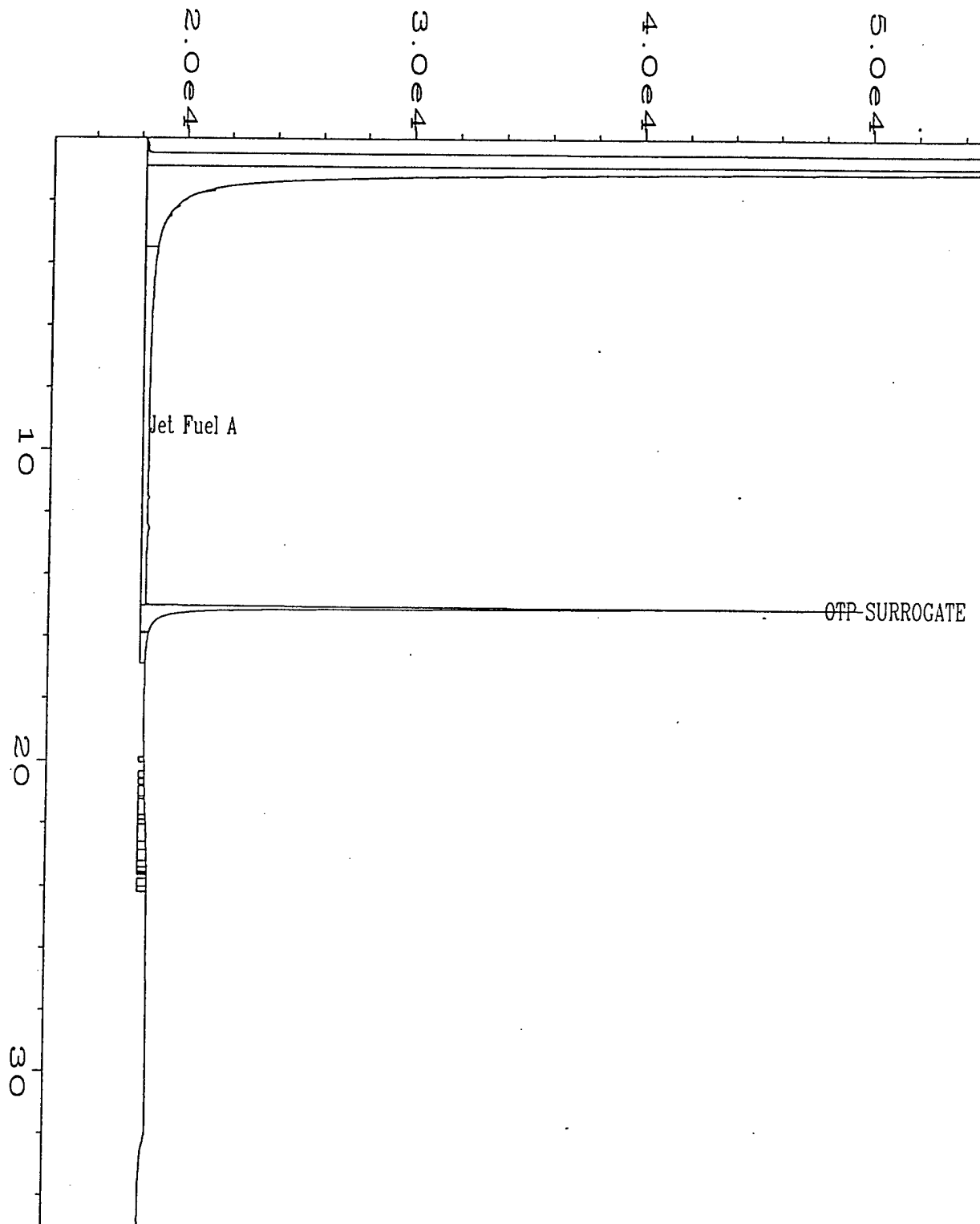
B = TEH found in blank.

E = Extrapolated value.

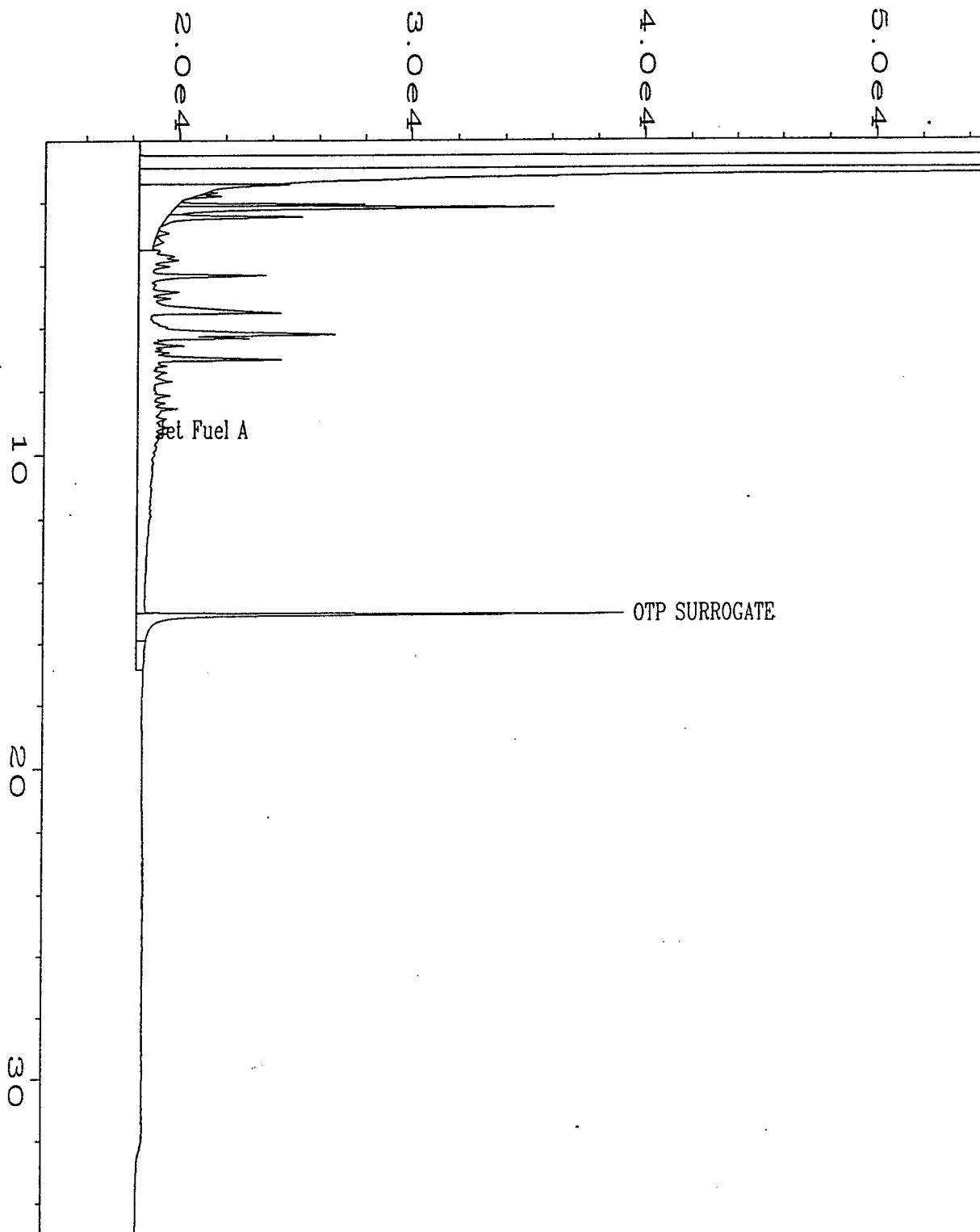
RL = Reporting Limit


Analyst

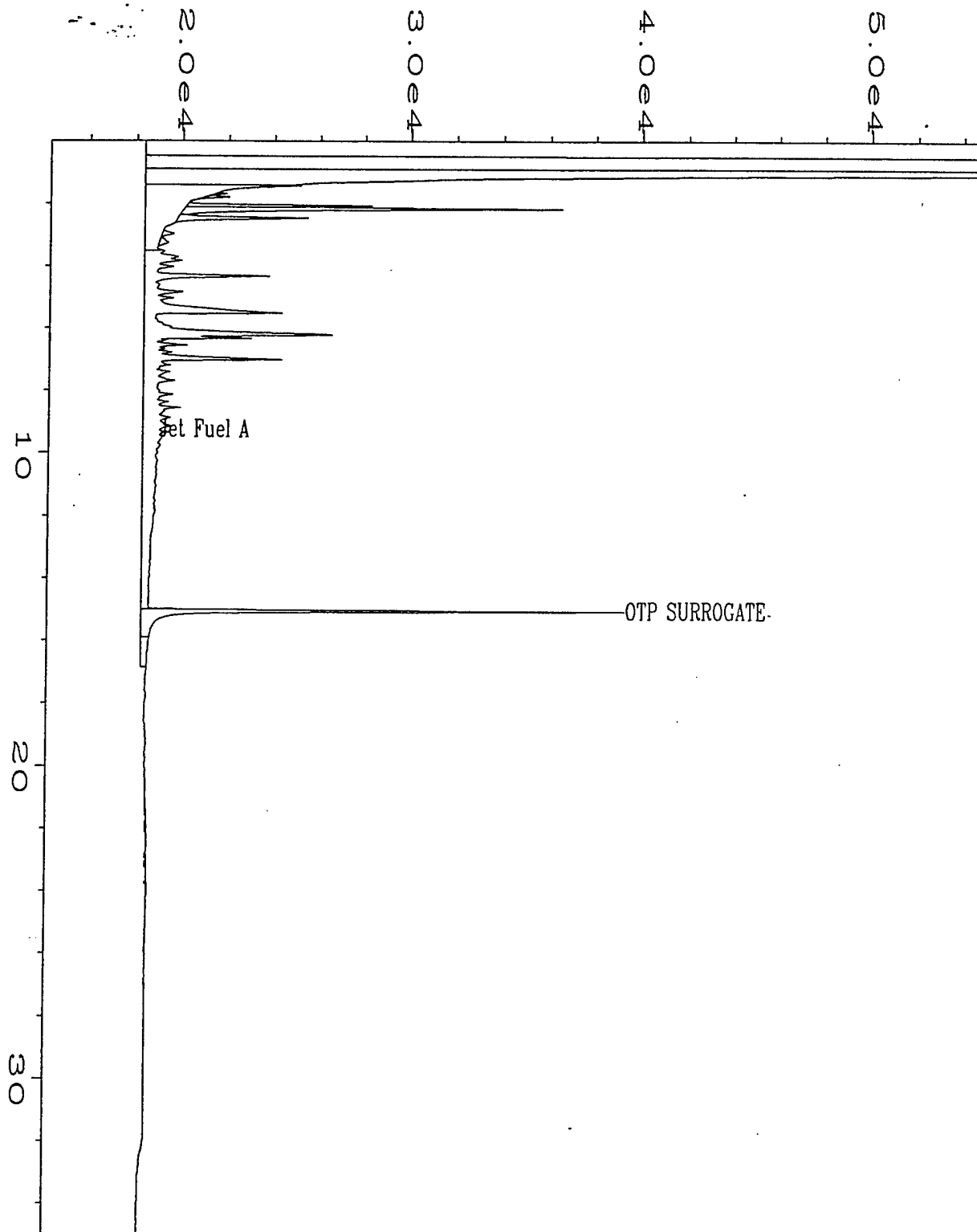

Approved



Data File Name	: C:\HPCHEM\2\DATA\JET0420\016R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 16
Instrument	: TEH	Injection Number	: 1
Sample Name	: WB042095	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
quired on	: 21 Apr 95 01:52 AM	Analysis Method	: JET0420.MTH
Report Created on:	: 21 Apr 95 09:33 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

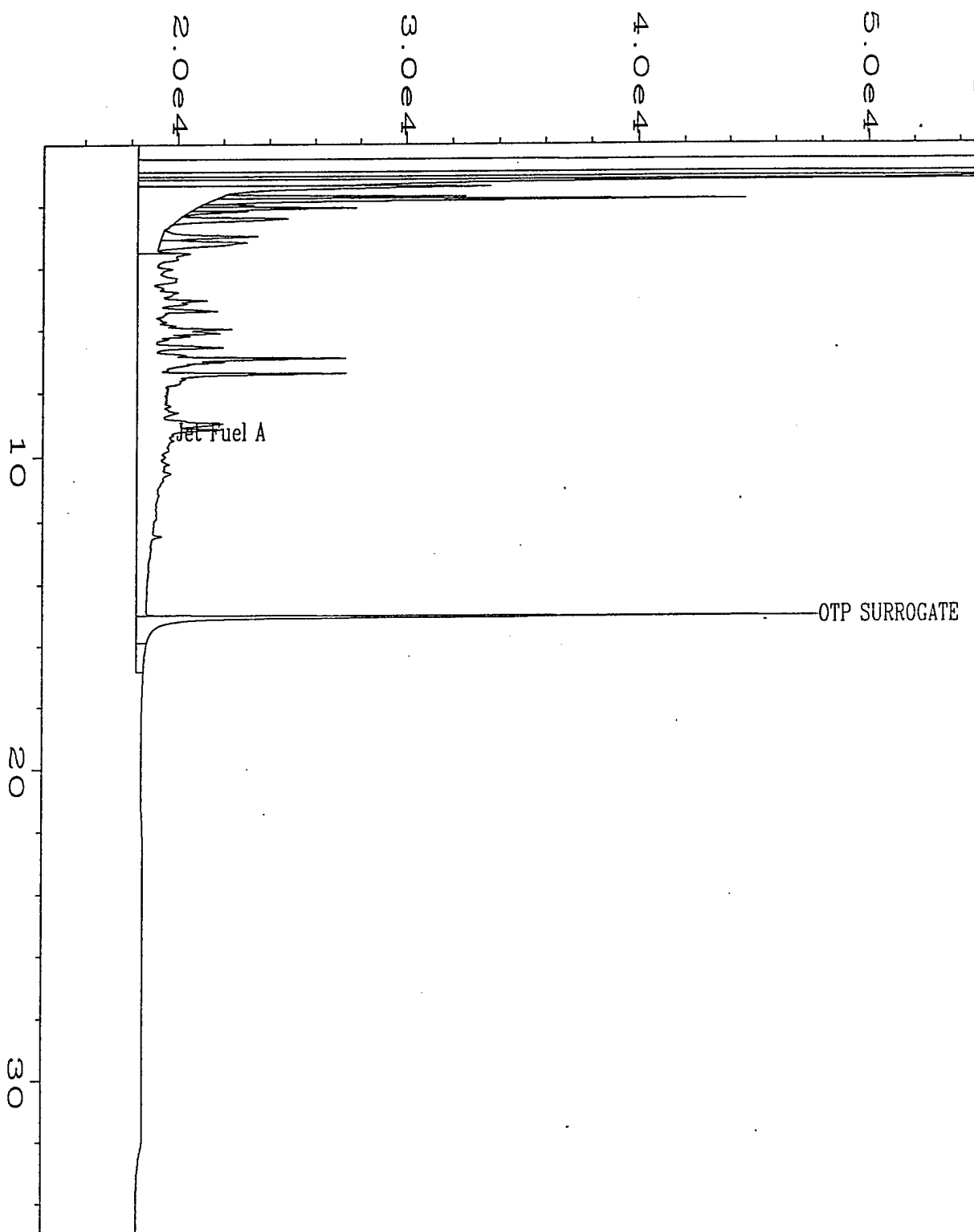


Data File Name	: C:\HPCHEM\2\DATA\JET0420\018R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 18
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05922 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BAS ME
Acquired on	: 21 Apr 95 03:25 AM	Analysis Method	: JET042 TH
Port Created on	: 21 Apr 95 03:52 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

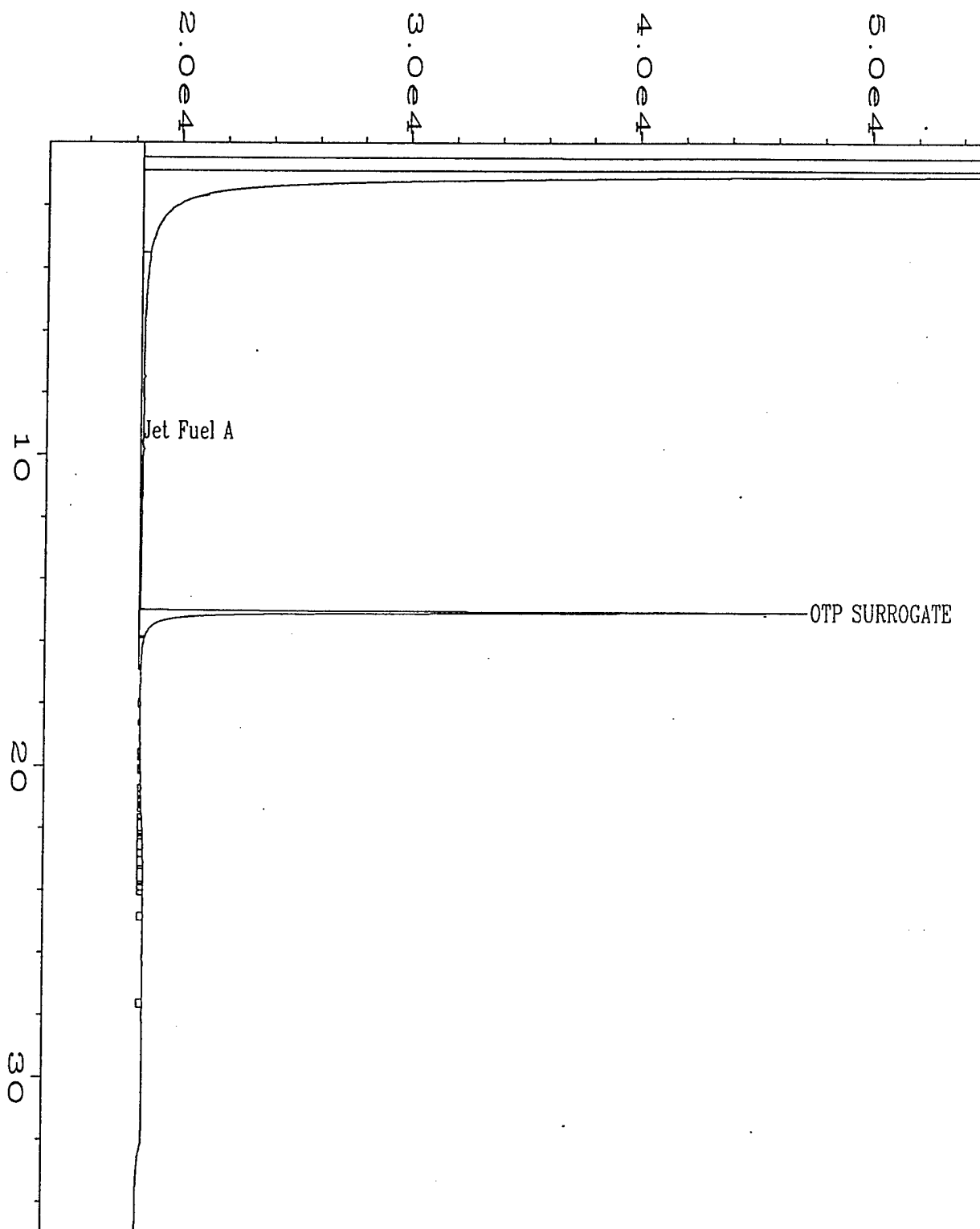


Data File Name	: C:\HPCHEM\2\DATA\JET0420\028R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 28
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05922 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 21 Apr 95 11:11 AM	Analysis Method	: JET0420.MTH
Report Created on	: 21 Apr 95 03:20 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

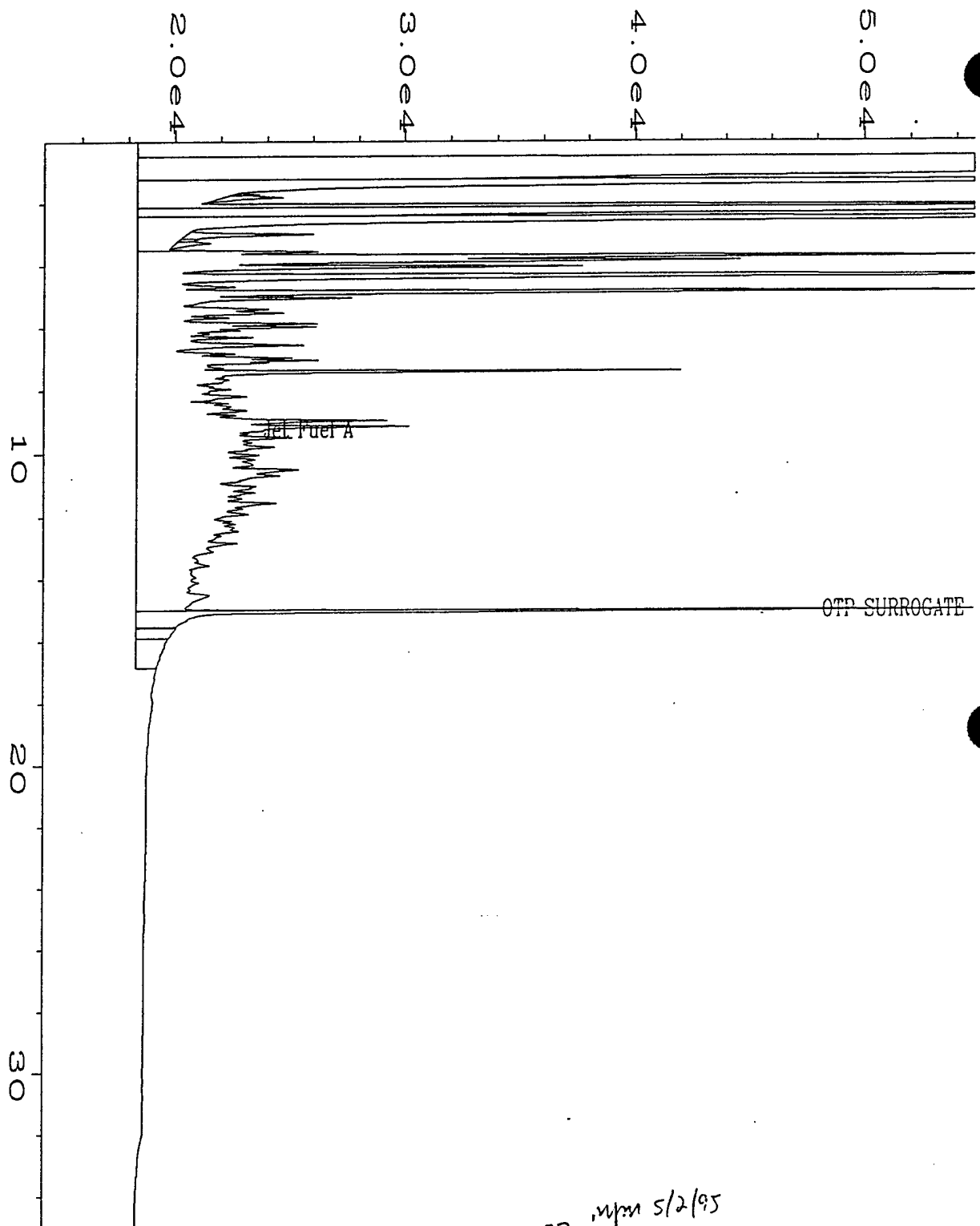
CPT-17 (Second Run)



Data File Name	: C:\HPCHEM\2\DATA\JET0420\020R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 20
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05923 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BA.M
quired on	: 21 Apr 95 04:57 AM	Analysis Method	: JET0420.M
port Created on:	: 21 Apr 95 10:22 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1264 CLIENT # CPT-18 WATER		



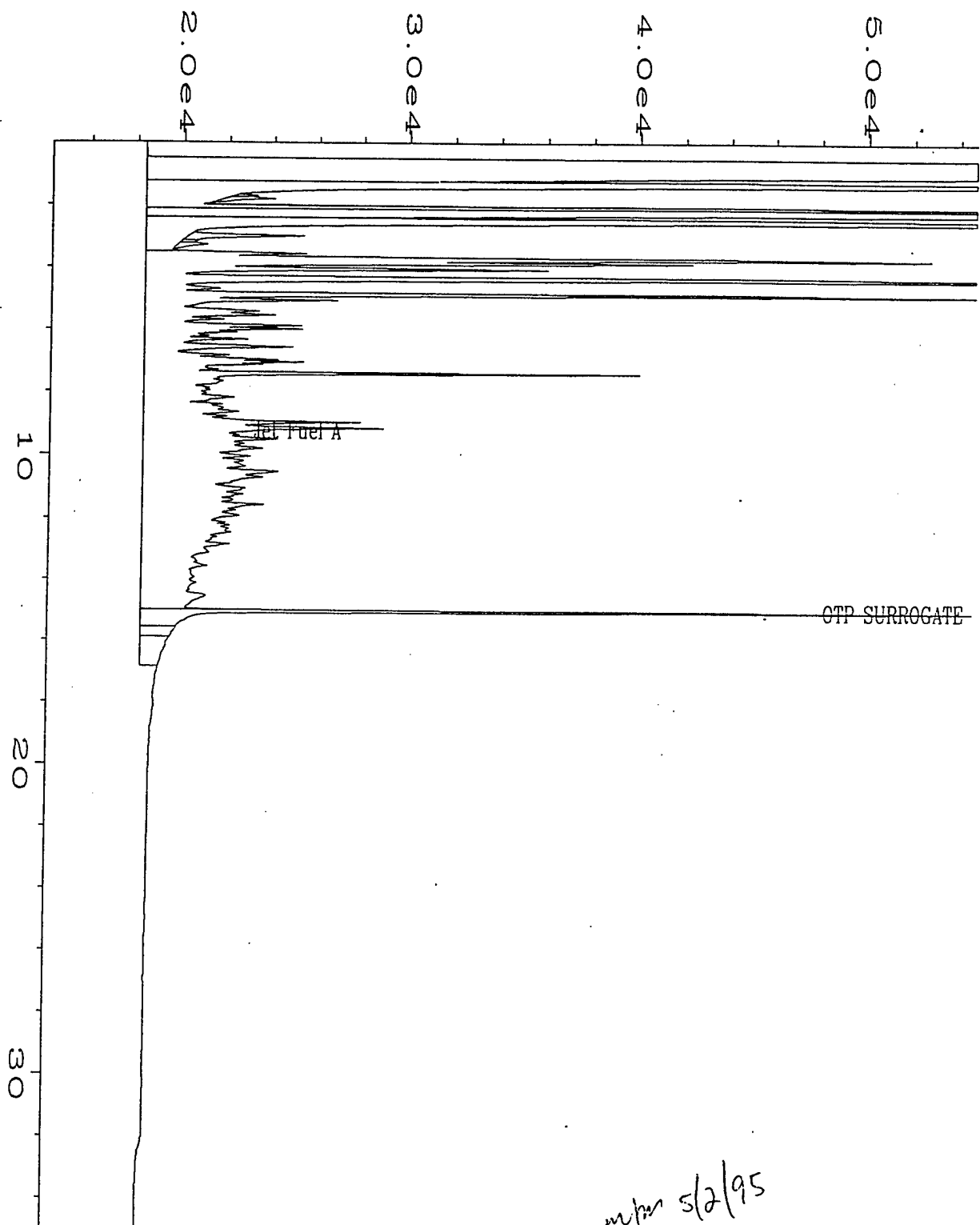
Data File Name	: C:\HPCHEM\2\DATA\JET0420\021R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 21
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05925 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTF
quired on	: 21 Apr 95 05:44 AM	Analysis Method	: JET0420.MTH
Report Created on:	: 21 Apr 95 10:22 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1264 CLIENT # CPT-19 WATER		



Data File Name : C:\HPCHEM\2\DATA\JET0420\031R0101.D
 Operator : Dawn N. Guildner
 Instrument : TEH
 Sample Name : X05926 DF=1
 Run Time Bar Code:
 quired on : 21 Apr 95 01:32 PM
 Report Created on: 21 Apr 95 03:20 PM
 Last Recalib on : 21 APR 95 09:09 AM
 Multiplier : 1

Page Number : 1
 Vial Number : 31
 Injection Number : 1
 Sequence Line : 1
 Instrument Method: FID1BA
 Analysis Method : JET0420.M
 Sample Amount : 0
 ISTD Amount :

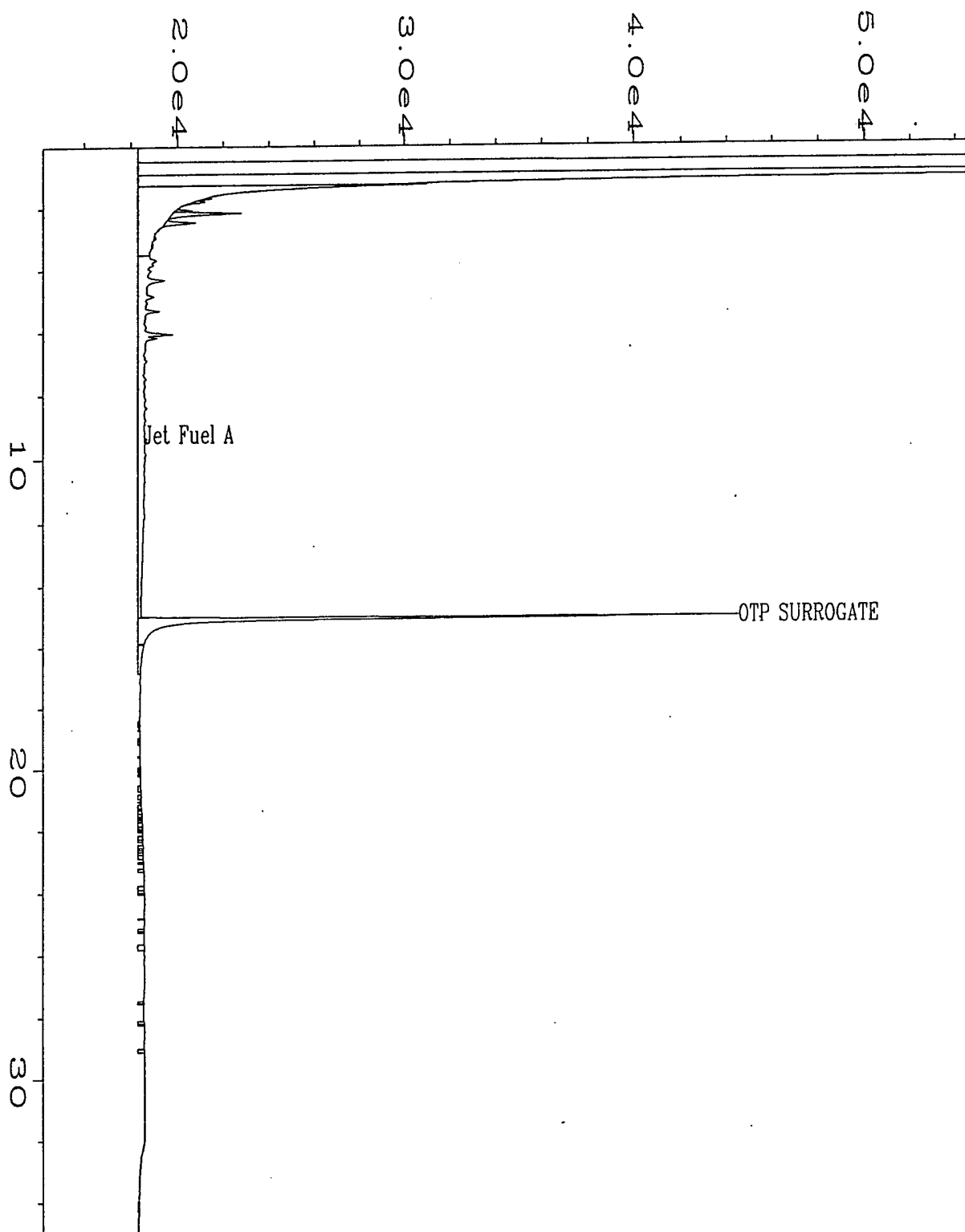
MW-4



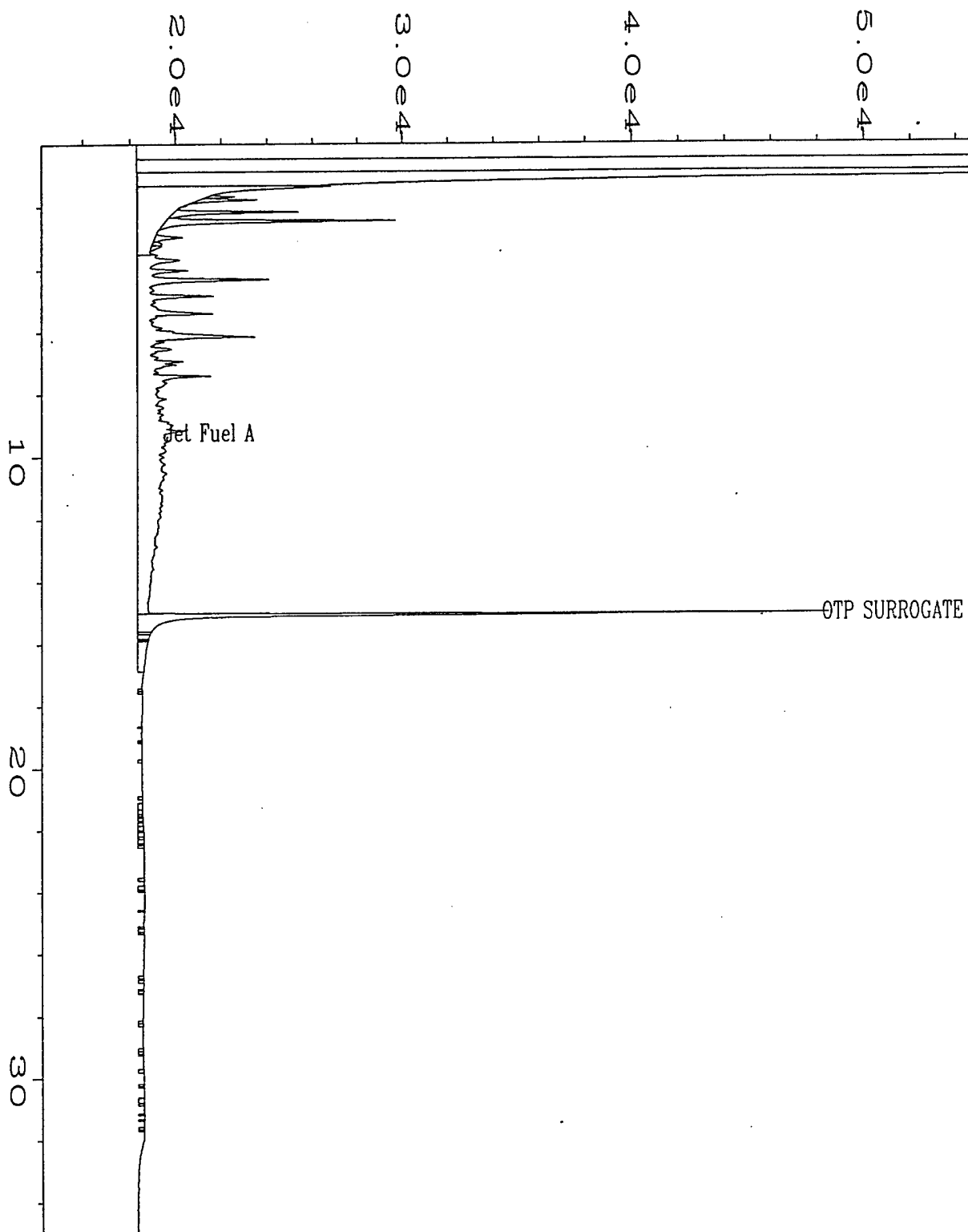
Data File Name : C:\HPCHEM\2\DATA\JET0420\032R0101.D
 Operator : Dawn N. Guildner
 Instrument : TEH
 Sample Name : X05927 DF=1
 Run Time Bar Code:
 Acquired on : 21 Apr 95 02:19 PM
 Report Created on: 21 Apr 95 03:20 PM
 Last Recalib on : 21 APR 95 09:09 AM
 Multiplier : 1

Page Number : 1
 Vial Number : 32
 Injection Number : 1
 Sequence Line : 1
 Instrument Method: FID1BASE.MTH
 Analysis Method : JET0420.MTH
 Sample Amount : 0
 ISTD Amount :

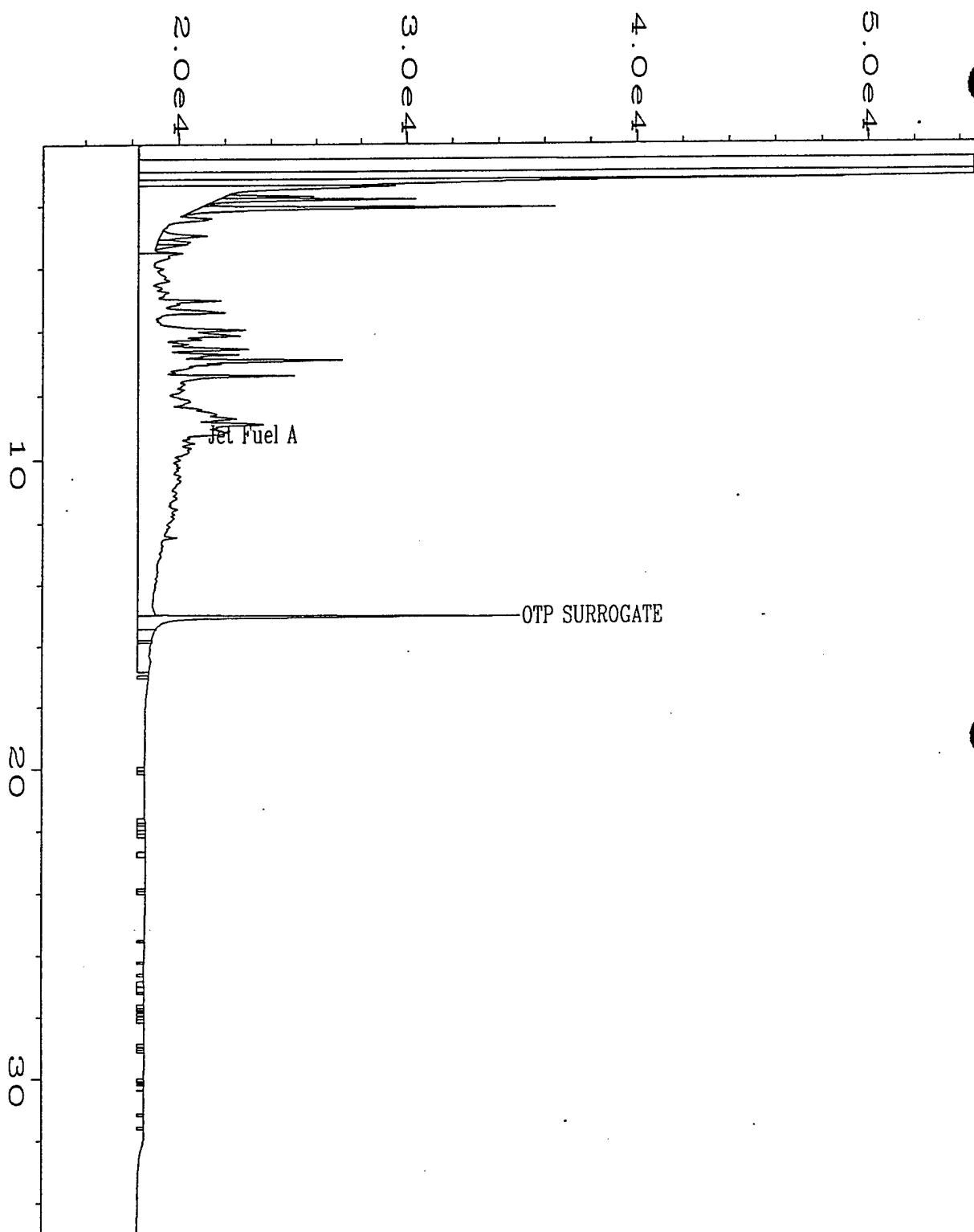
MW-4 DUPE



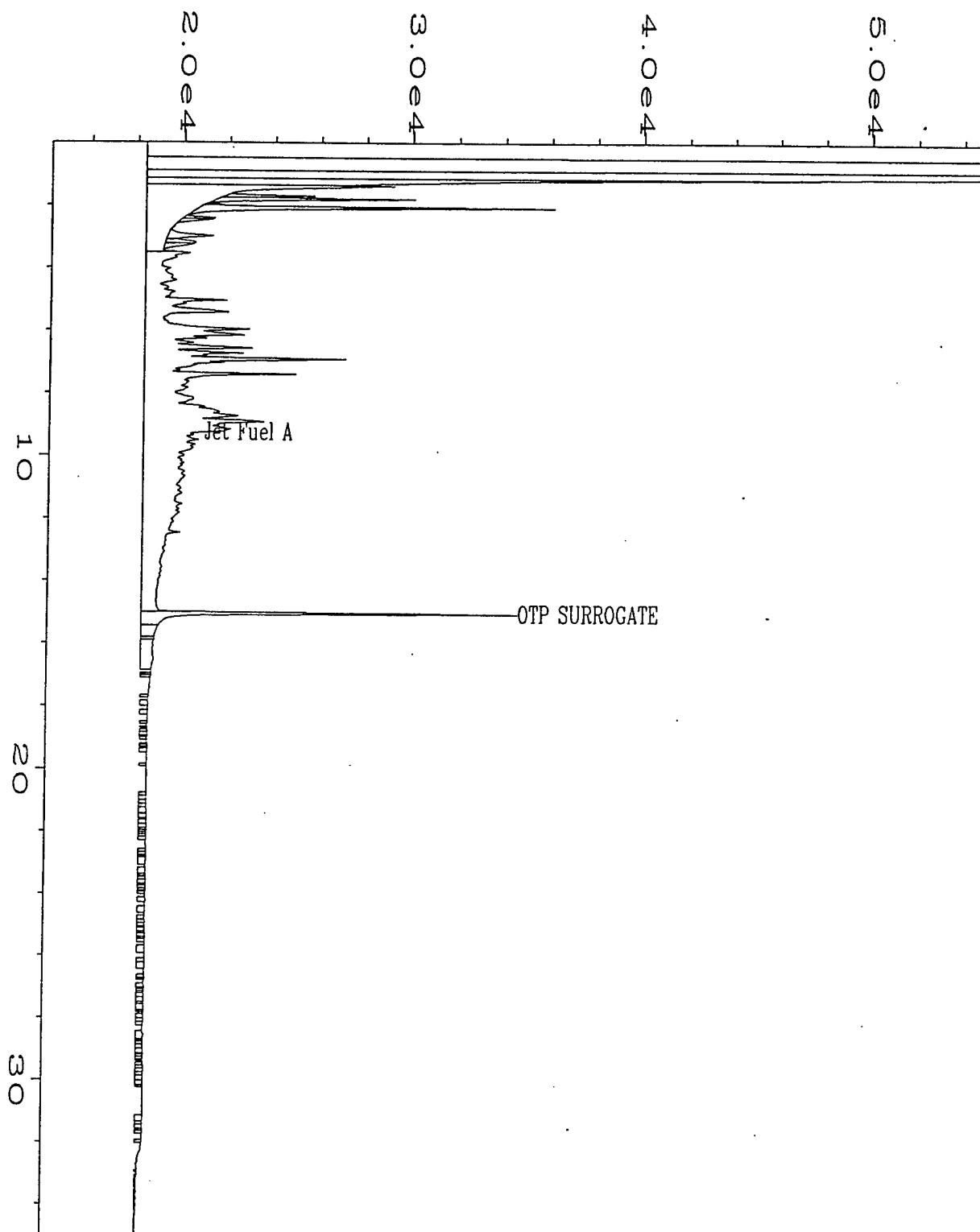
Data File Name	: C:\HPCHEM\2\DATA\JET0420\024R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 24
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05928 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	FID1BA
quired on	: 21 Apr 95 08:03 AM	Analysis Method	: JET0420.MT
Report Created on:	21 Apr 95 10:22 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1264 CLIENT # MW-12D WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0420\025R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 25
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05931 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 21 Apr 95 08:49 AM	Analysis Method	: JET0420.MTH
Report Created on	: 21 Apr 95 10:22 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1264 CLIENT # MW-5 WATER		

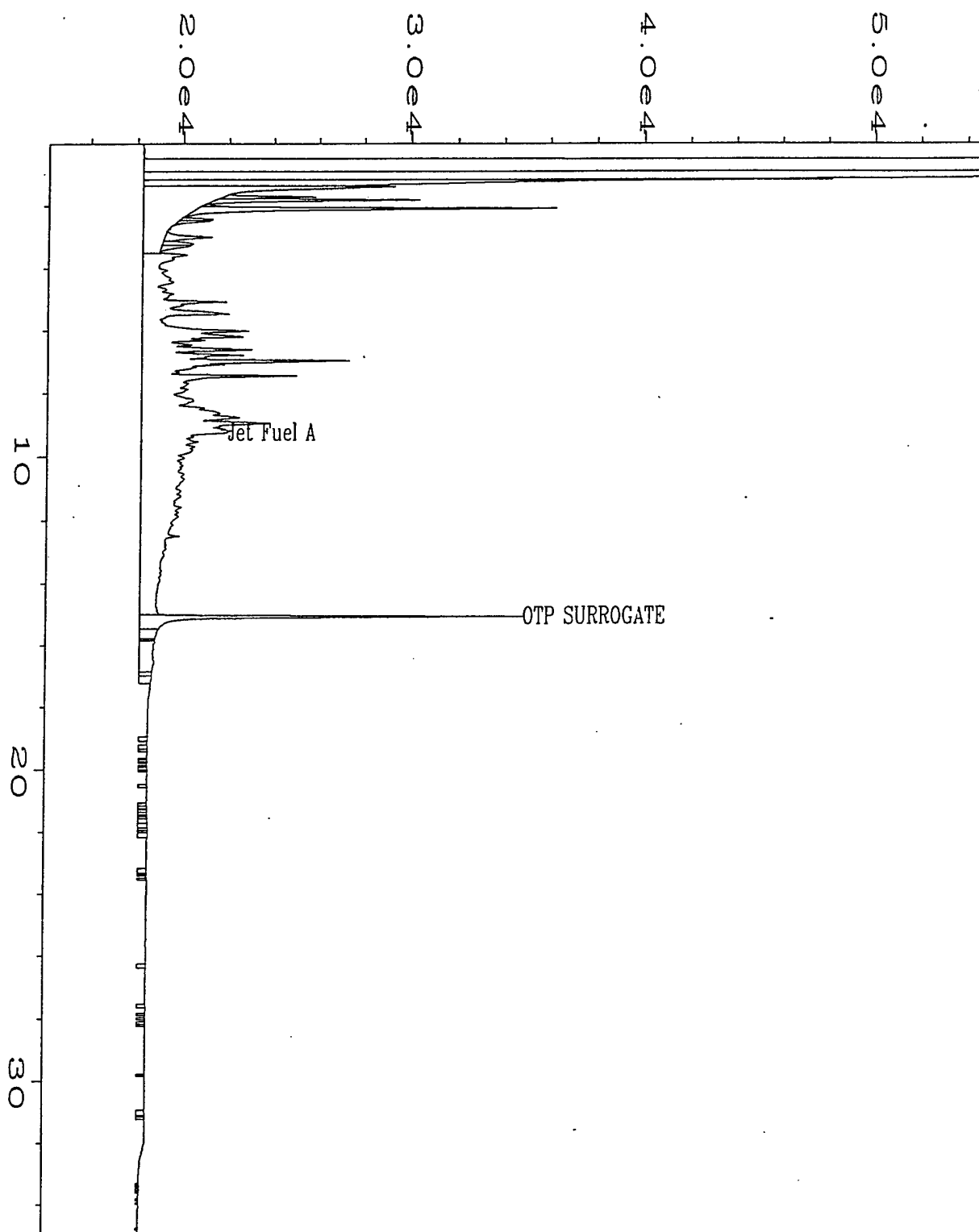


Data File Name	: C:\HPCHEM\2\DATA\JET0420\026R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 26
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05932 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BA
quired on	: 21 Apr 95 09:35 AM	Analysis Method	: JET0420.M
Report Created on:	: 21 Apr 95 03:53 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1264 CLIENT # MW-8 WATER		

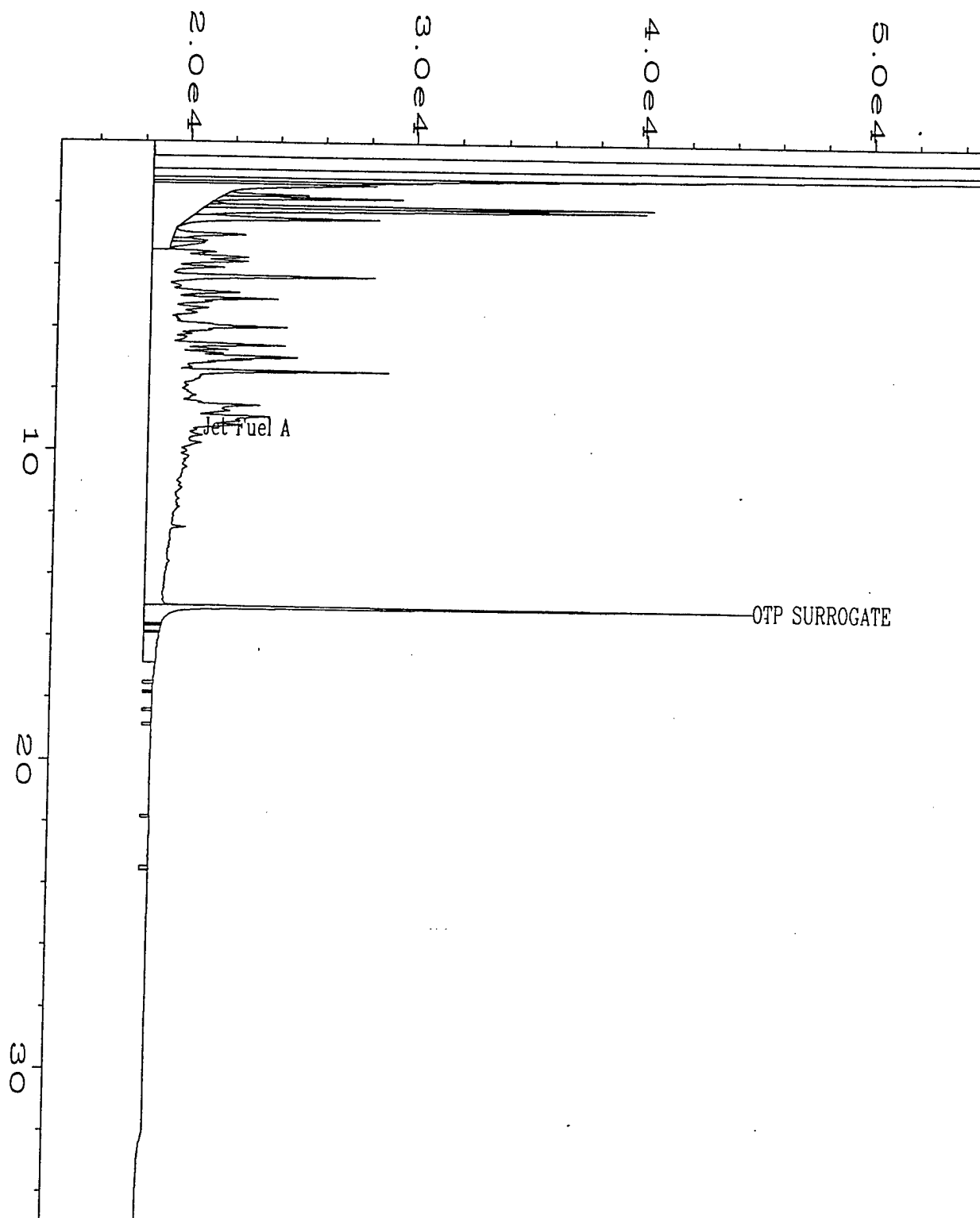


Data File Name	: C:\HPCHEM\2\DATA\JET0420\029R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 29
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05932 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 21 Apr 95 11:58 AM	Analysis Method	: JET0420.MTH
Report Created on	: 21 Apr 95 03:20 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

MW-8 (Second Run)



Data File Name	: C:\HPCHEM\2\DATA\JET0420\027R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 27
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05933 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BAS
Acquired on	: 21 Apr 95 10:24 AM	Analysis Method	: JET0420
Report Created on	: 21 Apr 95 03:53 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: PROJECT # 95-1264 CLIENT # MW-3 WATER		



Data File Name	: C:\HPCHEM\2\DATA\JET0420\033R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 33
Instrument	: TEH	Injection Number	: 1
Sample Name	: X05933 DF=1	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 21 Apr 95 03:06 PM	Analysis Method	: JET0420.MTH
Report Created on	: 21 Apr 95 03:55 PM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

MW-3 (Second Run)

EVERGREEN ANALYTICAL, INC.
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(303) 425-6021

TOTAL EXTRACTABLE HYDROCARBONS (TEH)
Laboratory Control Sample (LCS)

LCS Number : LCS042095 Matrix : WATER
Date Prepared : 4/20/95 Method Number : 5030/MOD.8015
Date Analyzed : 4/21/95
Sequence Number : JET17

<u>Compound Name</u>	<u>Theoretical Concentration mg/L</u>	<u>LCS Concentration mg/ L</u>	<u>LCS % Recovery</u>	<u>QC Limit % Recovery</u>
JET FUEL	1000	854	85%	70%-130%

Surrogate Recovery (OTP): 81%


QUALIFIERS

U = TEH analyzed for but not detected.

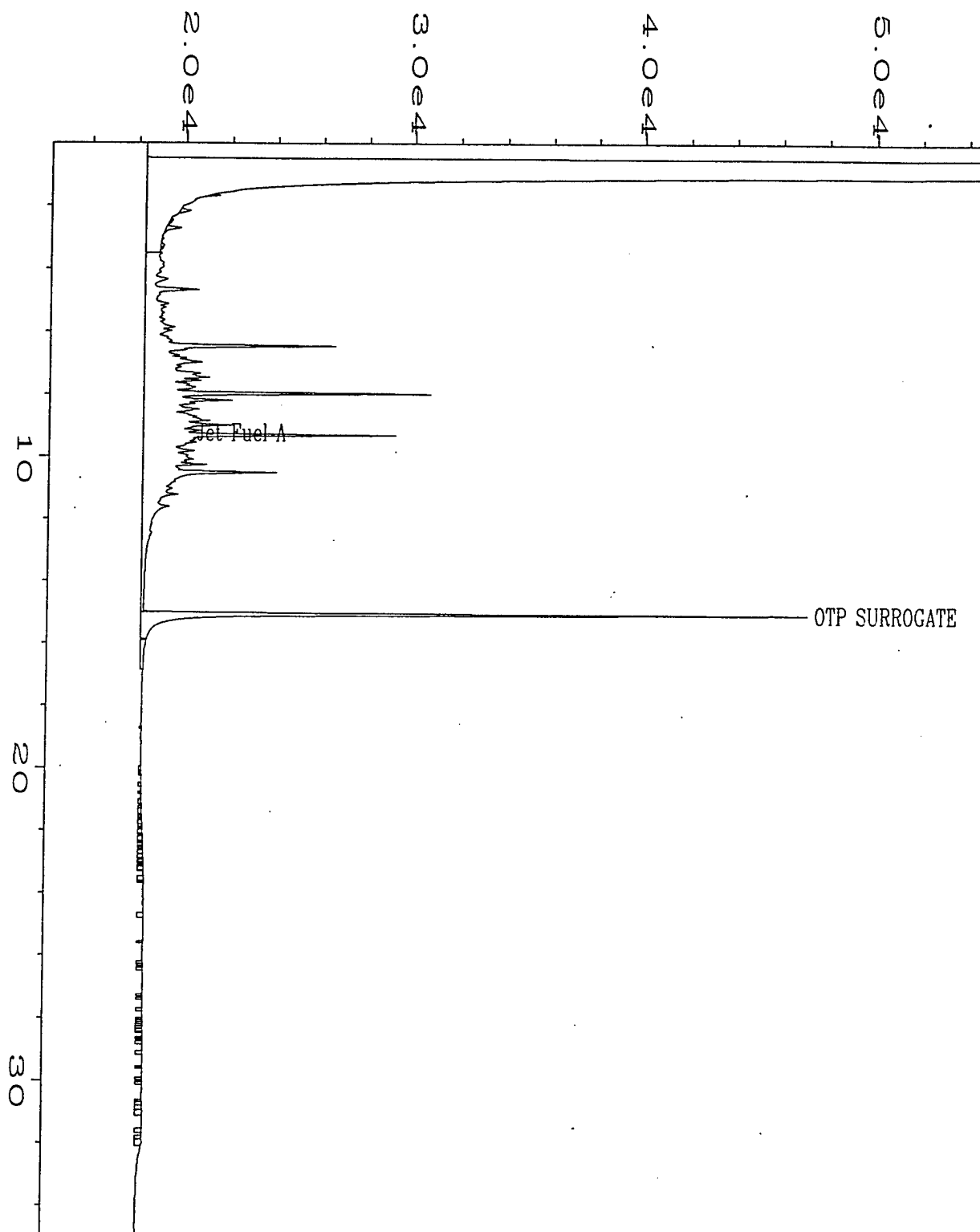
B = TEH found in blank as well as sample (blank data should be compared).

E = Extrapolated value.

NA=Not Available.


Analyst


Approved



Data File Name	: C:\HPCHEM\2\DATA\JET0420\017R0101.D	Page Number	: 1
Operator	: Dawn N. Guildner	Vial Number	: 17
Instrument	: TEH	Injection Number	: 1
Sample Name	: LCS042095	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: FID1BASE.MTH
Acquired on	: 21 Apr 95 02:38 AM	Analysis Method	: JET0420.MTH
Report Created on	: 21 Apr 95 09:34 AM	Sample Amount	: 0
Last Recalib on	: 21 APR 95 09:09 AM	ISTD Amount	:
Multiplier	: 1		

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Methane Data Report

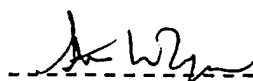
Date Sampled	: 04/18/95	Client Project No.:	722450.2602
Date Received	: 04/19/95	Lab Project No.	: 95-1264
Date Prepared	: 05/02/95	Dilution Factor	: 1.00
Date Analyzed	: 05/02/95	Method	: RSKSOP-175
		Matrix	: Water

Evergreen Sample #	Client Sample #	Matrix	Concentration mg/L	EDL* mg/L
-----	-----	-----	-----	-----
MB050295	Method Blank	Water	U	0.004
x05922	CPT-17	Water	0.12	0.004
x05923	CPT-18	Water	0.15	0.004
x05925	CPT-19	Water	U	0.004
x05926	MW-4	Water	U	0.004
x05928	MW-12D	Water	0.13	0.004
x05931	MW-5	Water	0.15	0.004
x05932	MW-8	Water	2.70	0.02*
x05933	MW-3	Water	1.92	0.02*

* DF=5 (100 ul of sample injected versus 500 ul for DF=1)

QUALIFIERS:

U = Compound analyzed for, but not detected above the
Estimated Detection Limit.
B = Compound also found in the blank, blank data should be
compared.
* = Indicates the Estimated Detection Limit.
E = Extrapolated value.

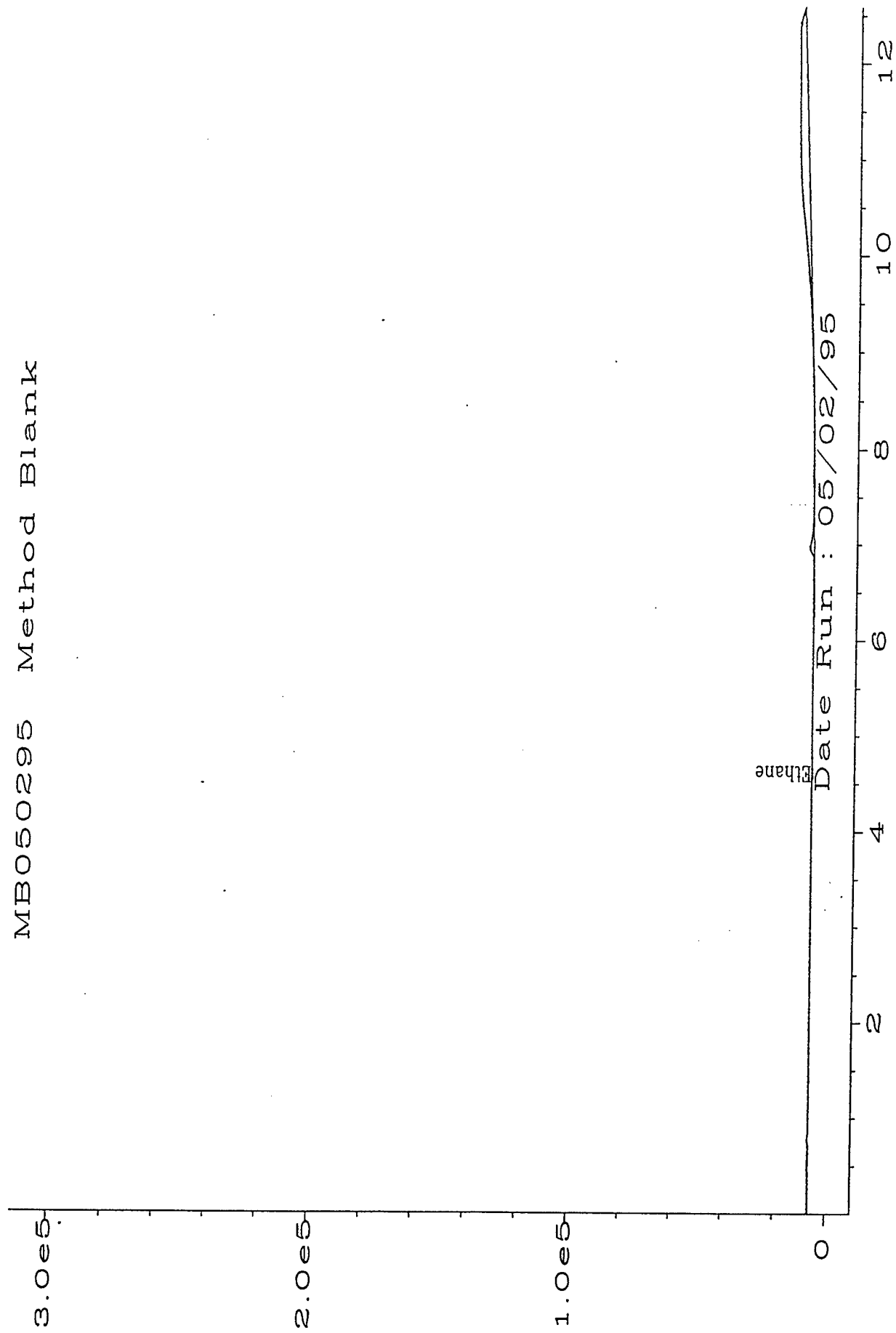


Analyst



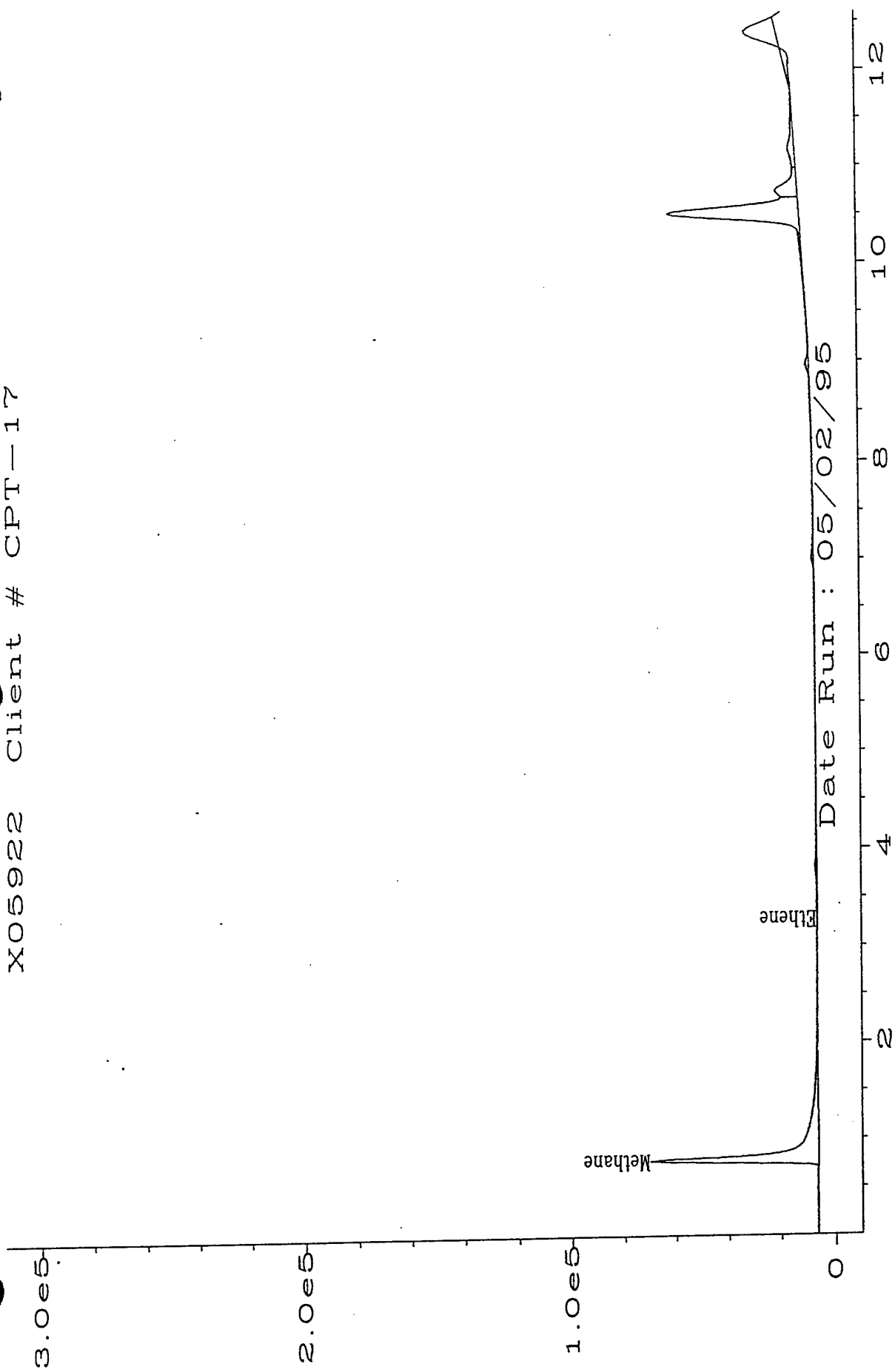
Approved

MB050295 Method Blank



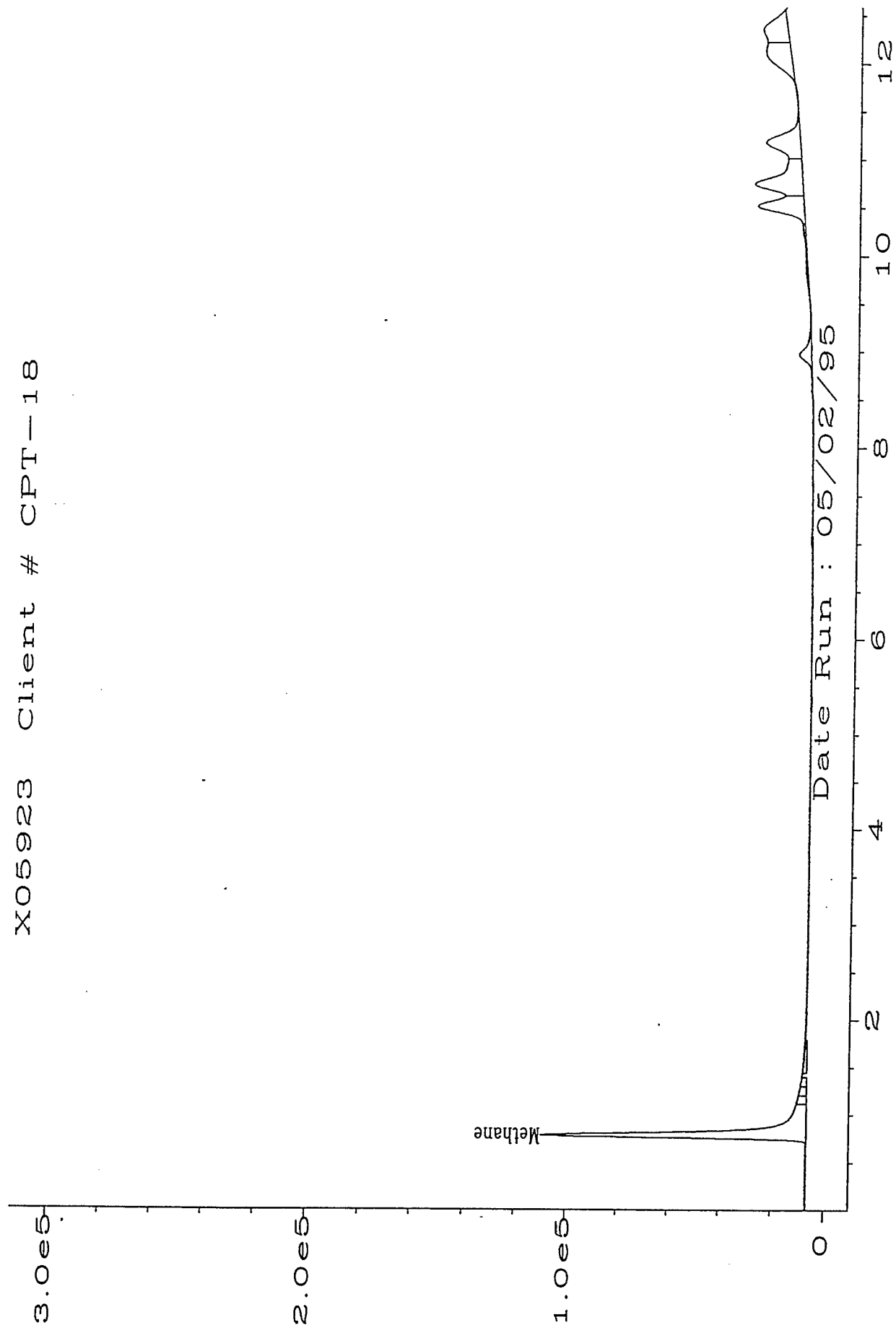
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\003R0101.D

X05922 Client # CPT-17



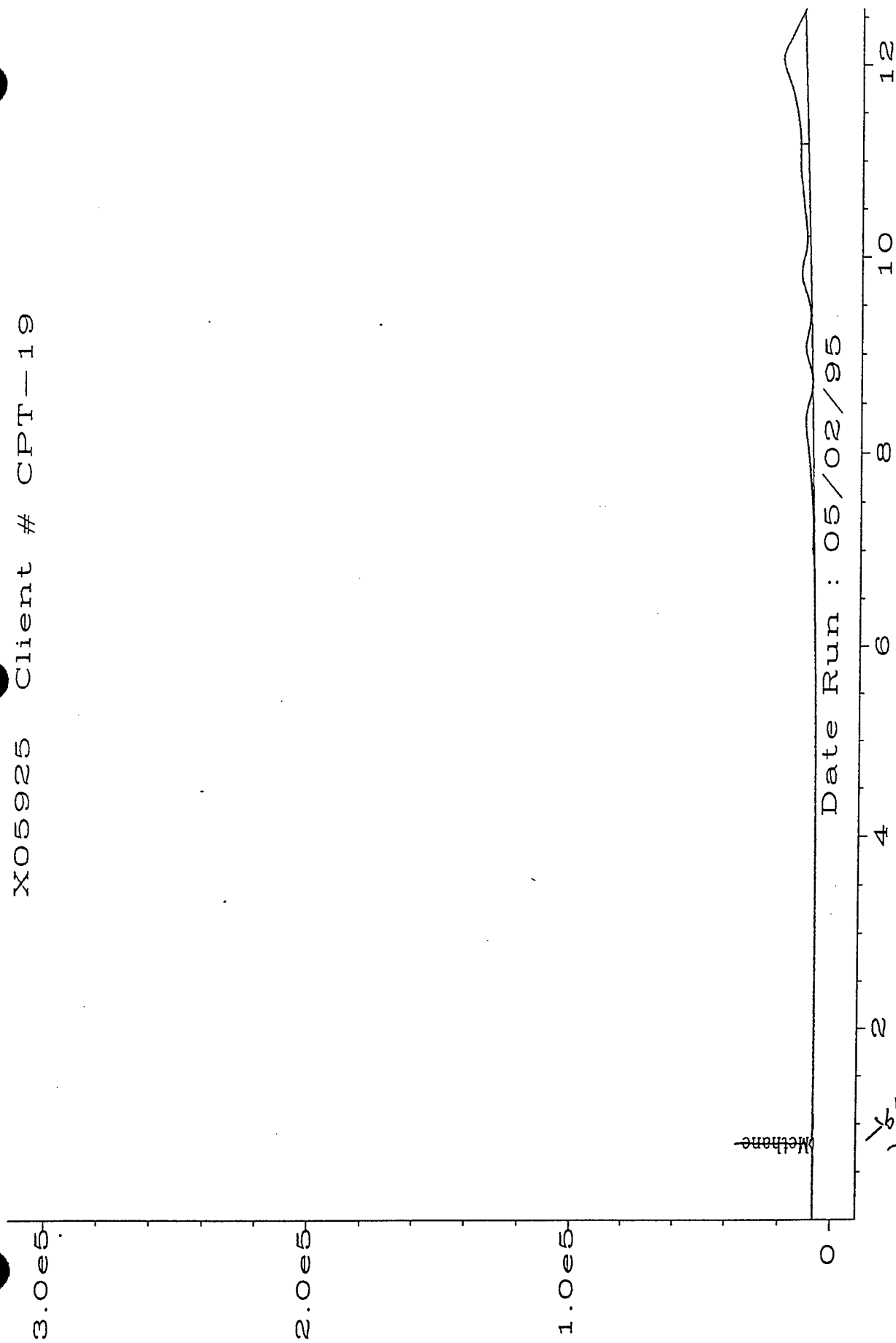
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X05923 Client # CPT-18



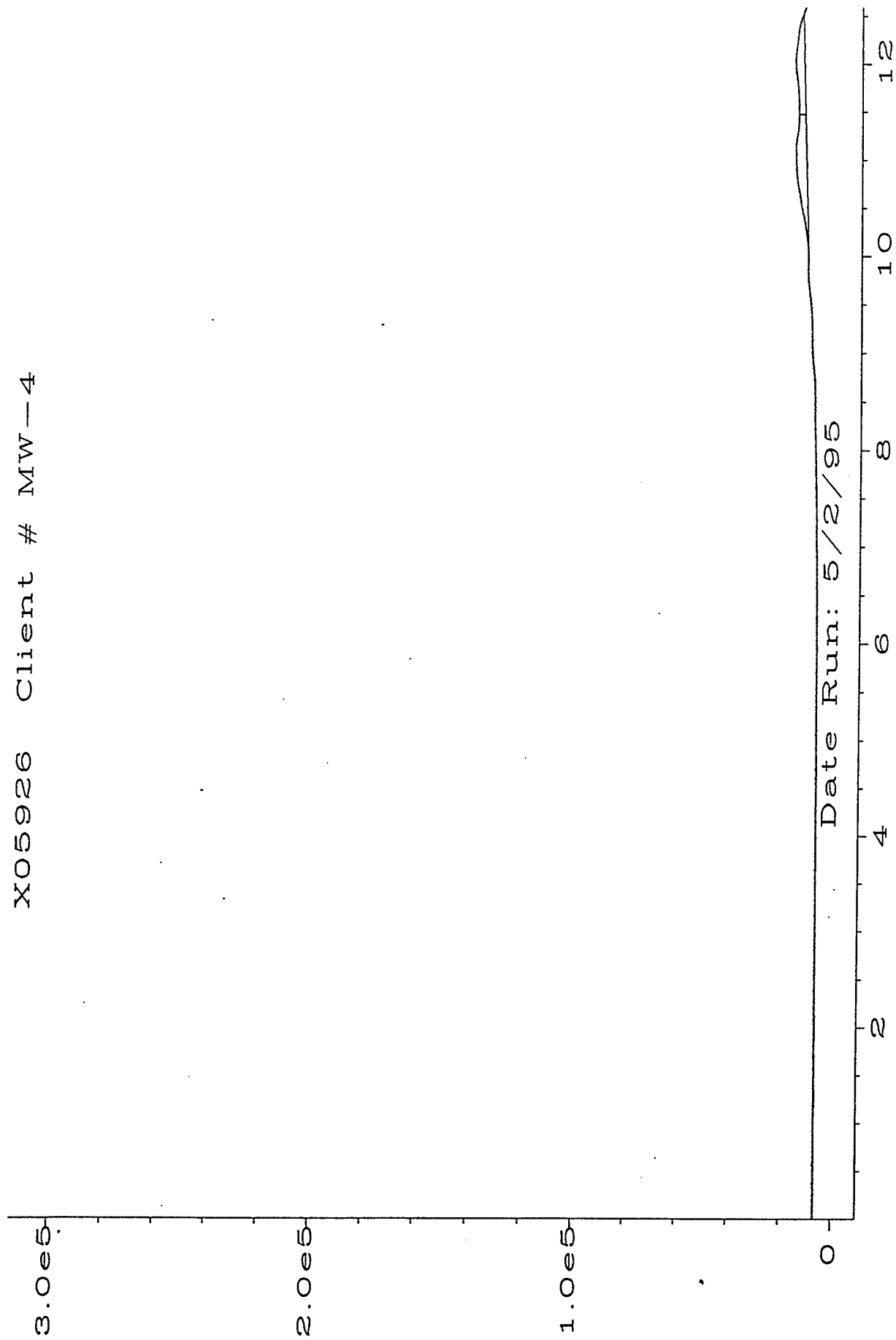
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\005R0101.D

X05925 Client # CPT-19



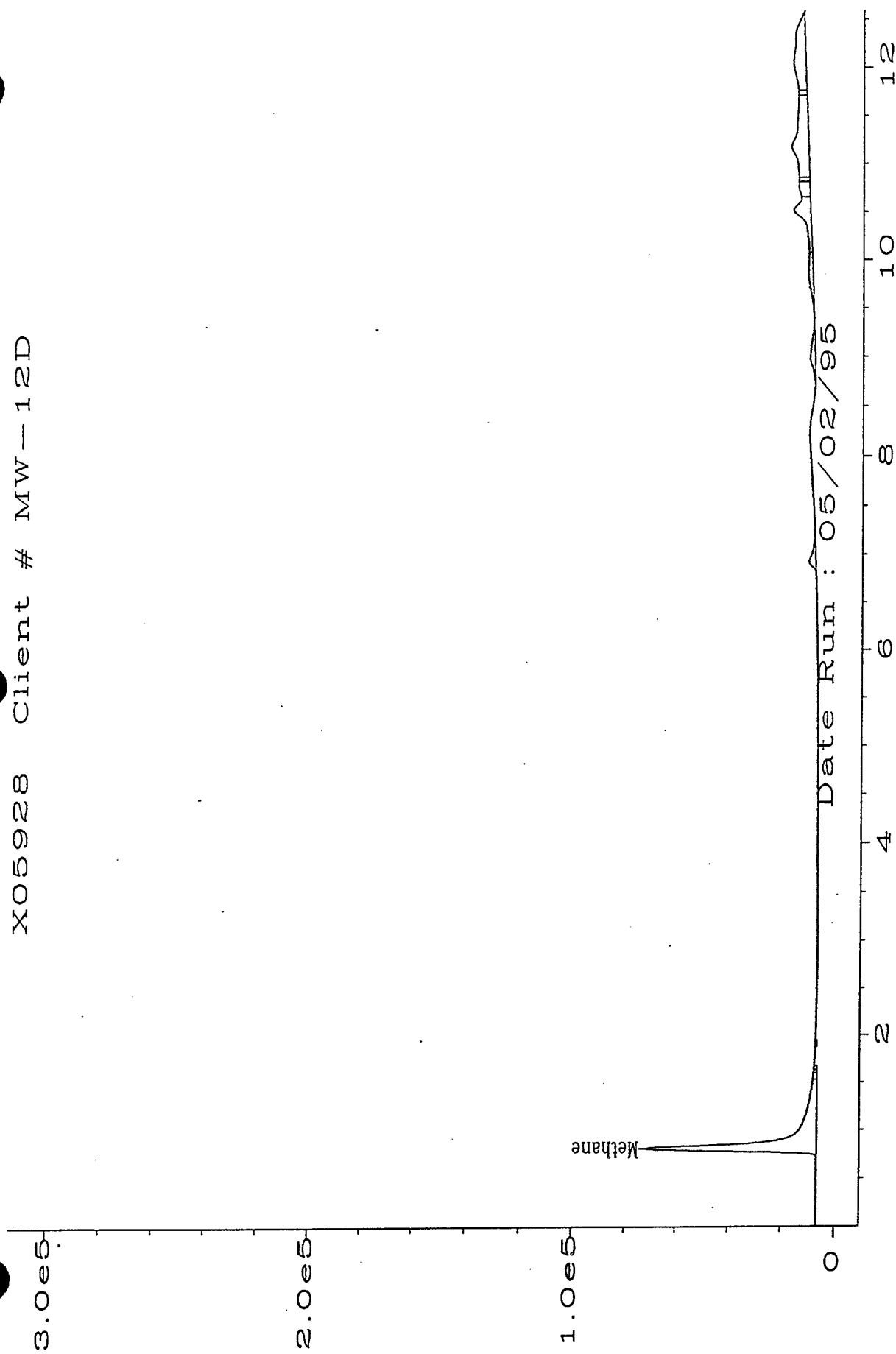
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\006R0101.D

X05926 Client # MW-4



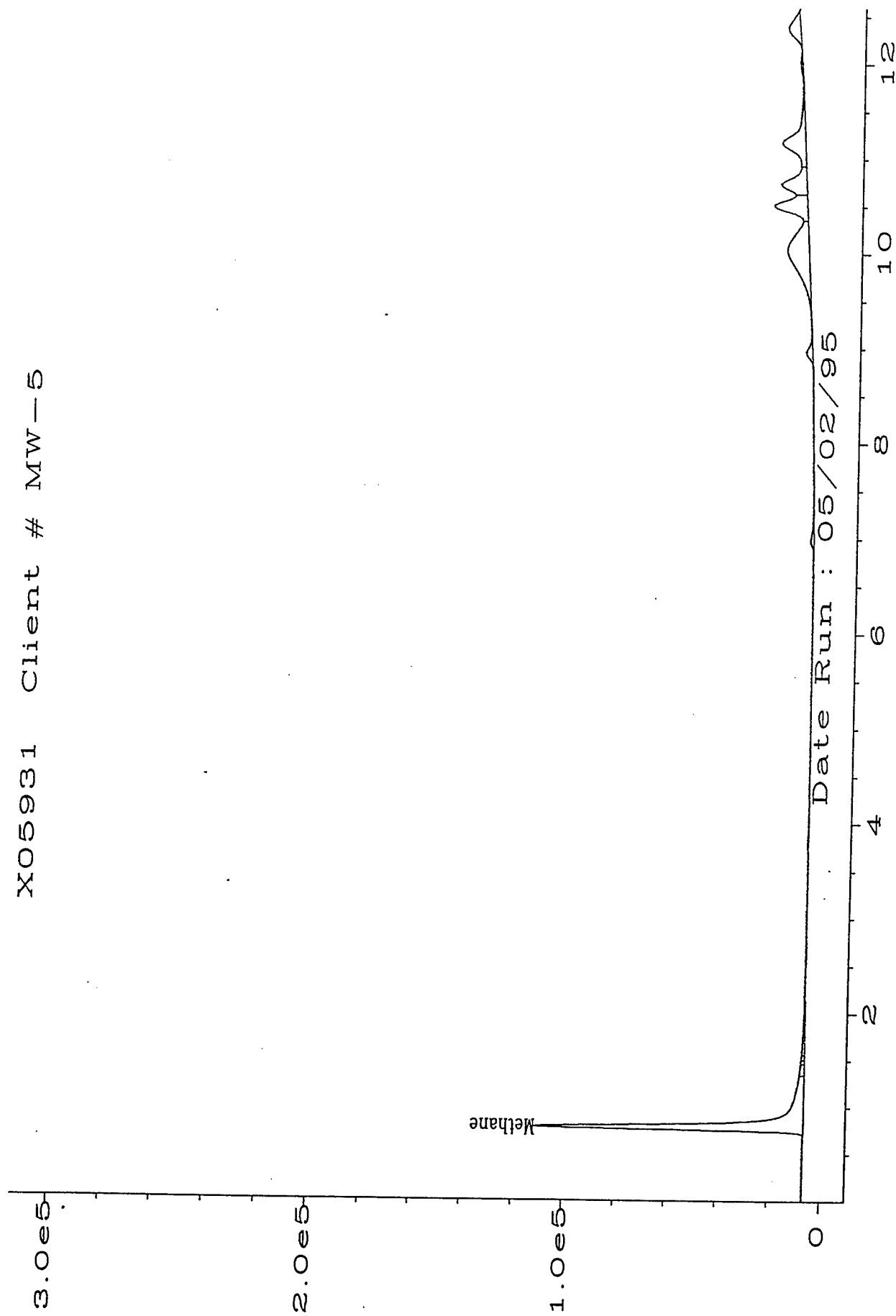
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\012R0101.D

X05928 Client # MW-12D



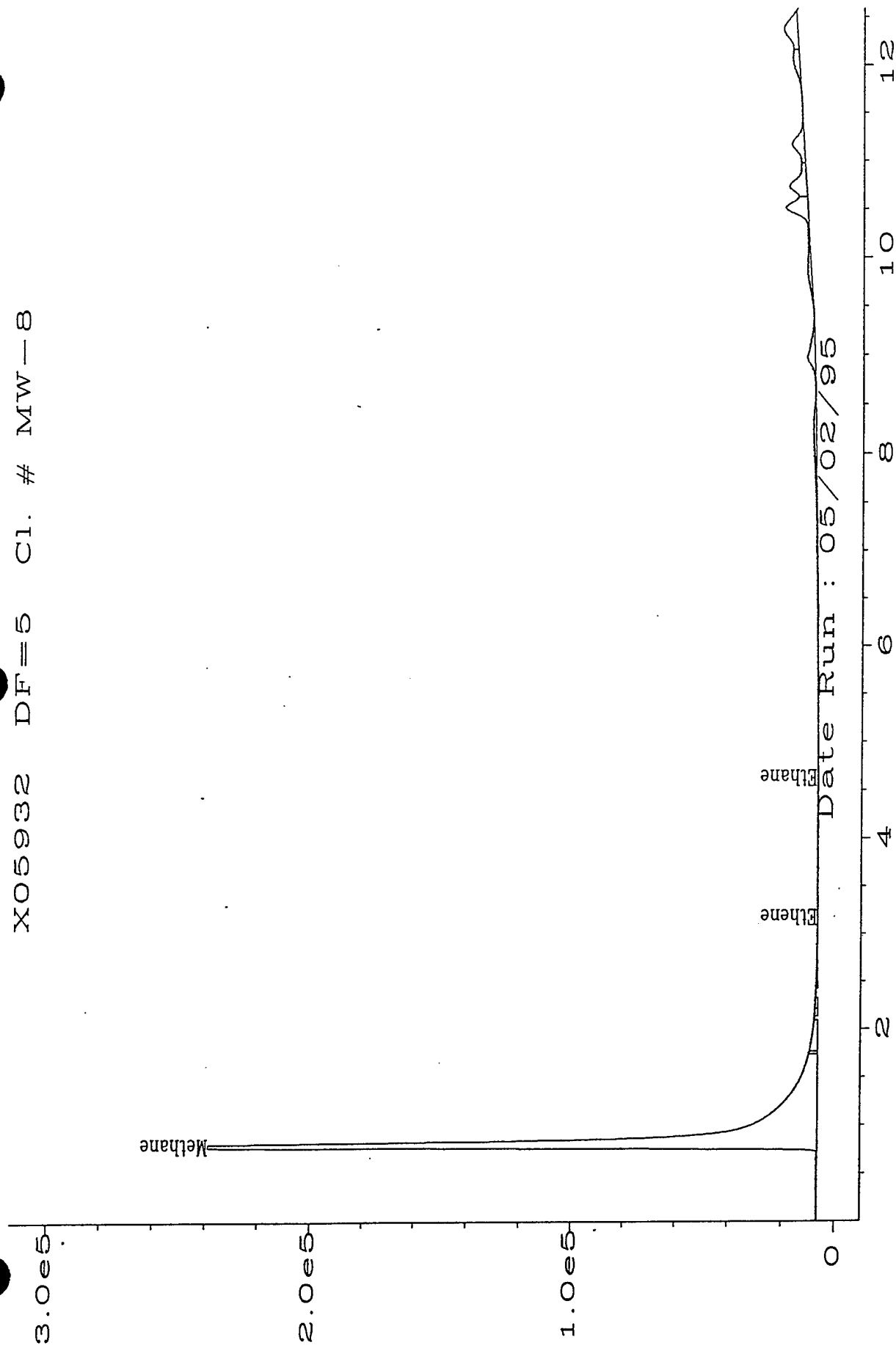
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\008R0101.D

X05931 Client # MW-5



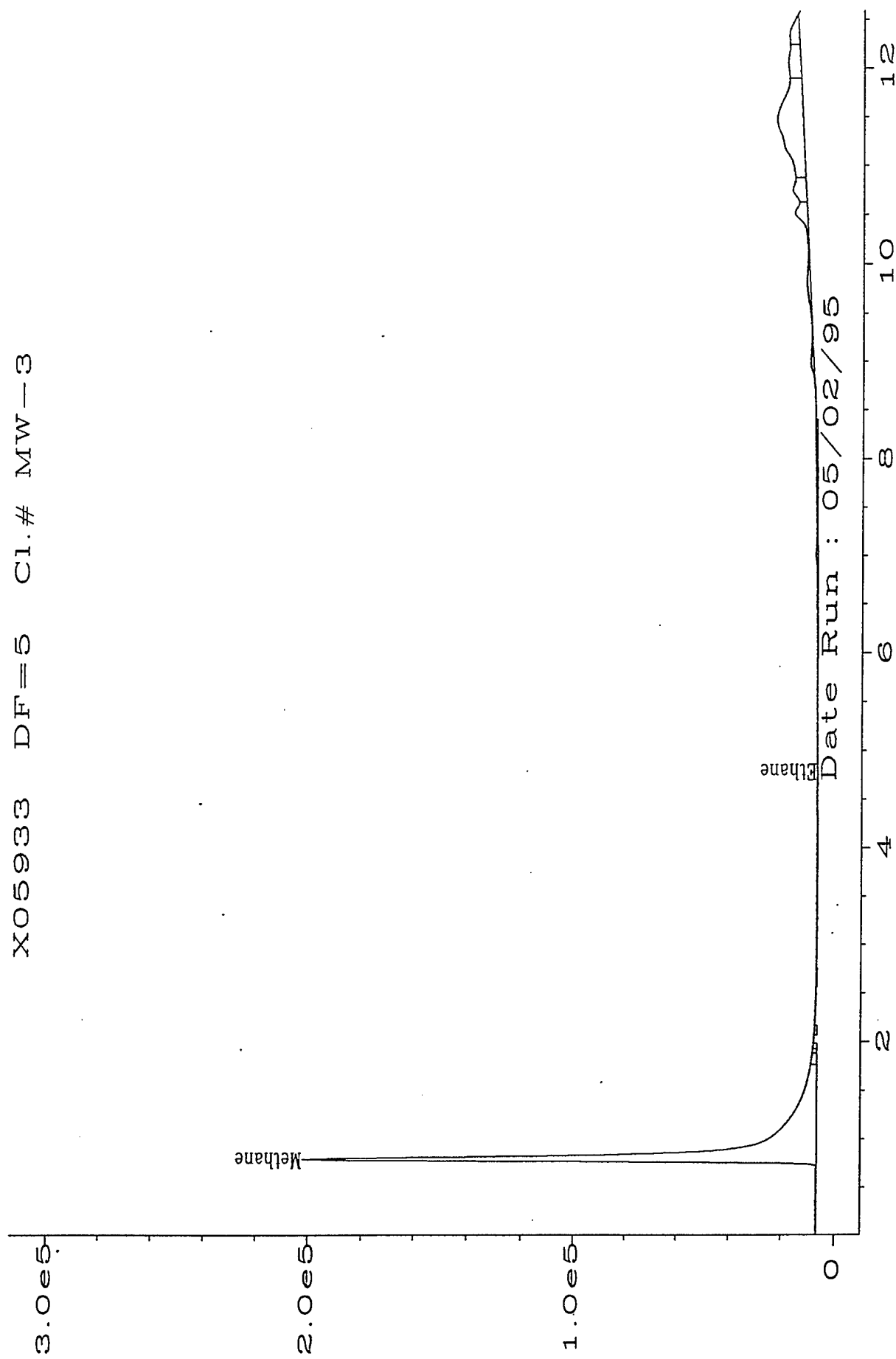
Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\009R0101.D

X05932 DF=5 C1. # MW-8



Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\010R0101.D

X05933 DF=5 Cl.# MW-3



Sig. 2 in C:\HPCHEM\2\DATA\GAS0502\011R0101.D

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

Miscellaneous Analyses

Date Sampled : 4/18/95
Date Received : 4/19/95
Date Prepared : 4/20/95
Date Analyzed : 4/20/95

722450.2602/Seymore
Client Project ID. : Johnson AFB
Lab Project No. : 95-1264
Detection Limit : 0.250 mg/L
Method : EPA 300.0

<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Chloride (mg/L)</u>
X05922	CPT-17	Water	14.0
X05922 Dup	CPT-17 Dup	Water	14.3
X05923	CPT-18	Water	17.0
X05925	CPT-19	Water	4.98
X05926	MW-4	Water	22.1

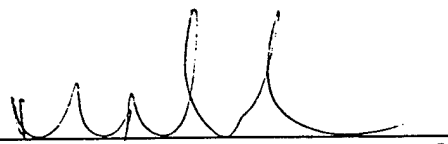
Method Blank 4/20/95

<0.250

Quality Assurance

	<u>True Value (mg/L)</u>	<u>Result (mg/L)</u>	<u>% Recovery</u>
Alltech Anion Mixture-A Lot #J-ION01134	20.0	19.1	95.5

Debra V. Byers
Analyst


Approved

EVERGREEN ANALYTICAL, INC.
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(303)425-6021

Miscellaneous Analyses

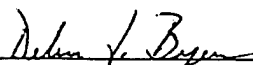
Date Sampled : 4/18/95	722450.2602/Seymore
Date Received : 4/19/95	Client Project ID. : Johnson AFB
Date Prepared : 4/20/95	Lab Project No. : 95-1264
Date Analyzed : 4/20/95	Detection Limit : 0.076 mg/L
	Method : EPA 300.0

<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Nitrite-N (mg/L)</u>
X05922	CPT-17	Water	<0.076
X05922 Dup	CPT-17 Dup	Water	<0.076
X05923	CPT-18	Water	<0.076
X05925	CPT-19	Water	<0.076
X05926	MW-4	Water	<0.076
X05928	MW-12D	Water	<0.076
X05931	MW-5	Water	<0.076
X05932	MW-8	Water	<0.076
X05933	MW-3	Water	<0.076
Method Blank 4/20/95			<0.076

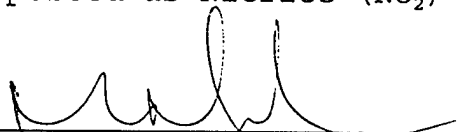
Quality Assurance**

	<u>True Value (mg/L)</u>	<u>Result (mg/L)</u>	<u>% Recovery</u>
Alltech Anion Mixture-A Lot #J-IONO1134	21.0	20.7	98.6

** = Quality Assurance results reported as Nitrite (NO₂)



Analyst



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EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

Date Sampled : 4/18/95 Client Project ID. : 722450.2602/Seymore
Date Received : 4/19/95 Lab Project No. : Johnson AFB
Date Prepared : 4/20/95 Detection Limit : 95-1264
Date Analyzed : 4/20/95 Method : 0.056 mg/L
EPA 300.0

<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Nitrate-N (mg/L)</u>
X05922	CPT-17	Water	<0.056
X05922 Dup	CPT-17 Dup	Water	<0.056
X05923	CPT-18	Water	<0.056
X05925	CPT-19	Water	0.058
X05926	MW-4	Water	<0.056
X05928	MW-12D	Water	<0.056
X05931	MW-5	Water	<0.056
X05932	MW-8	Water	<0.056
X05933	MW-3	Water	<0.056
Method Blank 4/20/95			<0.056

Quality Assurance**

	<u>True Value (mg/L)</u>	<u>Result (mg/L)</u>	<u>% Recovery</u>
Alltech Anion Mixture-A Lot #J-IONO1134	20.0	18.9	94.5

** = Quality Assurance results reported as Nitrate (NO₃)

Debra K. Beyer
Analyst

[Signature]
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303)425-6021

Miscellaneous Analyses

Date Sampled : 4/18/95
Date Received : 4/19/95
Date Prepared : 4/20/95
Date Analyzed : 4/20/95

722450.2602/Seymore
Client Project ID. : Johnson AFB
Lab Project No. : 95-1264
Detection Limit : 0.250 mg/L
Method : EPA 300.0

<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Sulfate (mg/L)</u>
X05922	CPT-17	Water	2.04
X05922 Dup	CPT-17 Dup	Water	2.06
X05923	CPT-18	Water	3.68
X05925	CPT-19	Water	14.1
X05926	MW-4	Water	11.6
X05928	MW-12D	Water	4.00
X05931	MW-5	Water	11.6
X05932	MW-8	Water	6.35
X05933	MW-3	Water	3.95
Method Blank 4/20/95			<0.250

Quality Assurance

	<u>True Value (mg/L)</u>	<u>Result (mg/L)</u>	<u>% Recovery</u>
Alltech Anion Mixture-A Lot #J-IONO1134	30.0	29.0	96.7

Debra V. Byers
Analyst

[Signature]
Approved

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(303)425-6021

Miscellaneous Analyses

722450.2602/Seymore
Date Sampled : 4/18/95 Client Project ID. : Johnson AFB
Date Received : 4/19/95 Lab Project No. : 95-1264
Date Prepared : 4/20/95 Detection Limit : 5.00 mgCaCO₃/L
Date Analyzed : 4/20/95 Method : EPA 310.1

<u>Evergreen Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Total Alkalinity (mgCaCO₃/L)</u>
X05923	CPT-18	Water	54.1
X05923 Dup	CPT-18 Dup	Water	51.8
X05926	MW-4	Water	68.4
X05928	MW-12D	Water	<5.00
X05931	MW-5	Water	<5.00
X05932	MW-8	Water	<5.00
Method Blank 4/20/95			<5.00

Quality Assurance

	<u>True Value (mgCaCO₃/L)</u>	<u>Result (mgCaCO₃/L)</u>	<u>% Recovery</u>
APG Minerals reference Lot #13862	11.8	11.5	97.5

Debra L. Byers
Analyst

Approved

1264cm.4

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

INORGANIC ANALYSIS DATA SHEET

Date Sampled :4/18/95 Client Project :Seymore Johnson AFB
Date Received:4/19/95 Lab Project No.:95-1264
Date Prepared:4/28/95 Method :600/4-79-020, 200.7
Date Analyzed:5/1/95 Matrix :Water

Units: mg/L

Basis: Total Metal

Client Sample#	MW-4	MW-12D		
Evergreen Sample#	X05926P	X059280	Reagent Blank	Reporting Limits
Pb	< 0.055	< 0.055	< 0.055	0.055

Digested Reference: Inorganic Ventures Lead Lot # J-PB02038	True Value (mg/L)	Result (mg/L)	% Recovery
	2.00	1.67	83.5

M.C.

Analyst

DC

Approved

INORGANIC ANALYSIS DATA SHEET
MATRIX SPIKE REPORT

Client Sample #:	MW-4	722450.2602
Lab Sample #	:X05926MS	Client Project :Seymore Johnson AFB
Date Sampled	:4/18/95	Lab Project # :95-1264
Date Received	:4/19/95	Method :600/4-79-020, 200.7
Date Prepared	:4/28/95	Matrix :Water
Date Analyzed	:5/1/95	Basis :Total Metal

Element	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spiked Amount (mg/L)	Percent Recovery
Pb	0.93	< 0.055	1.00	93

M.C.
Analyst

DC
Approved

EVERGREEN ANALYTICAL, INC.
4036 Youngfield St. Wheat Ridge, CO 80033
(303) 425-6021

INORGANIC ANALYSIS DATA SHEET
MATRIX SPIKE DUPLICATE REPORT

Client Sample #	:MW-4	722450.2602
Lab Sample #	:X05926MSD	Client Project:Seymore Johnson AFB
Date Sampled	:4/18/95	Lab Project # :95-1264
Date Received	:4/19/95	Method :600/4-79-020, 200.7
Date Prepared	:4/28/95	Matrix :Water
Date Analyzed	:5/1/95	Basis :Total Metal

Element	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spiked Amount (mg/L)	Percent Recovery	Relative % Difference
Pb	0.904	< 0.055	1.00	90.4	2.8

M.C.

Analyst

DC

Approved

APPENDIX C
GRIDDED MODEL INPUT AND CALIBRATION RESULTS
FOR BIOPLUME II MODEL

Sensitivity Analysis

Along Column 13 (x=13)

y	Distance (ft)	Final Calibration		Dispersivity		Conductivity		Concentration (ug/l)		Anaerobic Decay Coefficient		Retardation	
		Setup16	z	Dispersivity		Dispersivity x 10		Dispersivity x 10		Dispersivity x 10		Dispersivity x 10	
				sen-b01	z	sen-b10	z	sen-k01	z	sen-k10	z	sen-a01	z
		Calibrated Model	Dispersivity x.1	Dispersivity x.1	Dispersivity x.1	Dispersivity x.1	Dispersivity x.1	K x 0.1	K x 10	K x 10	K x 10	sen-a10	z
2	100	0	0	0	0	0	0	0	0	0	0	0	0
3	150	0	0	0	0	0	0	0	0	0	0	0	0
4	200	0	0	0	0	0	0	0	0	0	0	0	0
5	250	0	0	0	0	348	0	0	0	0	0	0	0
6	300	11506	12301	0	0	6116	0	35819	0	772	0	2015	0
7	350	4405	4526	0	0	3615	0	0	864	864	0	28076	15829
8	400	1342	1290	0	0	1424	0	0	1186	18273	0	22877	8988
9	450	317	45	0	0	457	0	0	625	12553	0	18273	3798
10	500	0	0	0	0	0	0	0	713	6822	0	12553	2177
11	550	0	0	0	0	0	0	0	746	1670	0	6822	1060
12	600	0	0	0	0	0	0	0	708	227	0	1670	521
13	650	0	0	0	0	0	0	0	668	0	0	227	232
14	700	0	0	0	0	0	0	0	605	0	0	0	0
15	750	0	0	0	0	0	0	0	515	0	0	0	0
16	800	0	0	0	0	0	0	0	403	0	0	0	0
17	850	0	0	0	0	0	0	0	270	0	0	0	0
18	900	0	0	0	0	0	0	0	147	0	0	0	0
19	950	0	0	0	0	0	0	0	57	0	0	0	0
20	1000	0	0	0	0	0	0	0	0	0	0	0	0
21	1050	0	0	0	0	0	0	0	0	0	0	0	0
22	1100	0	0	0	0	0	0	0	0	0	0	0	0
23	1150	0	0	0	0	0	0	0	0	0	0	0	0
24	1200	0	0	0	0	0	0	0	0	0	0	0	0
25	1250	0	0	0	0	0	0	0	0	0	0	0	0
26	1300	0	0	0	0	0	0	0	0	0	0	0	0
27	1350	0	0	0	0	0	0	0	0	0	0	0	0
28	1400	0	0	0	0	0	0	0	0	0	0	0	0
29	1450	0	0	0	0	0	0	0	0	0	0	0	0

Gridded BTEX Plume

R = 19.3

Co

R = 1

Seymour Johnson AFB
Groundwater Model Calibration Error
Setup-2

Location	Average Water Level	Calibrated Water Level	Deviation from Mean		
			$h_m - h_s$	$\text{abs}(h_m - h_s)$	$(h_m - h_s)^2$
MW-3	87.20	86.13	-1.07	1.07	1.15
MW-4	86.54	85.91	-0.62	0.62	0.39
MW-5	86.14	85.70	-0.45	0.45	0.20
MW-6	85.77	85.48	-0.29	0.29	0.09
MW-7	86.00	85.91	-0.09	0.09	0.01
MW-8	87.04	86.35	-0.69	0.69	0.48
MW-11	86.42	85.91	-0.51	0.51	0.26
MW-14	86.70	85.70	-1.00	1.00	1.01
MW-15	86.08	85.48	-0.60	0.60	0.36
MW-16	85.43	85.26	-0.17	0.17	0.03
MW-17	85.37	85.26	-0.11	0.11	0.01
MW-18	86.45	86.56	0.11	0.11	0.01
MW-19	87.05	87.00	-0.05	0.05	0.00
CPT-16	86.18	85.69	-0.49	0.49	0.24
CPT-17	86.74	85.91	-0.83	0.83	0.68
CPT-18	86.58	86.13	-0.45	0.45	0.20
		Totals:	-7.32	7.5	5.1
		n= 16			
		ME= -0.457			
		MAE= 0.47			
		RMS= 0.57			

h_m = Calibrated Water Level

h_s = Actual Water Level

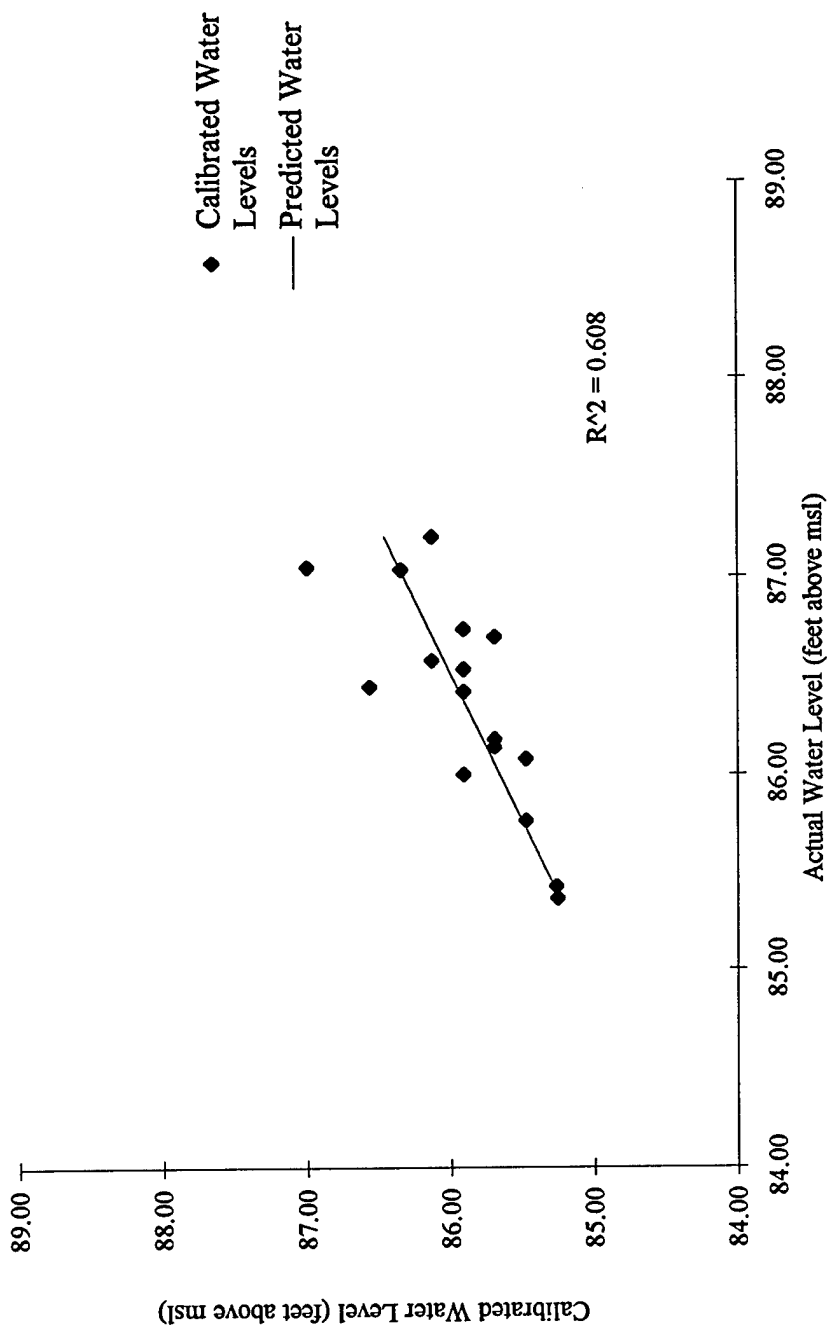
n = Number of Observations

$ME = 1/n * \sum (h_m - h_s)$

$MAE = 1/n * \sum |h_m - h_s|$

$RMS = (1/n * \sum (h_m - h_s)^2)^{0.5}$

Groundwater Model Water Table Calibration



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.780323519
R Square	0.608904794
Adjusted R Square	0.580969422
Standard Error	0.301888784
Observations	16

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	1.986501483	1.986501483	21.79691029	0.000362007
Residual	14	1.275915733	0.091136838		
Total	15	3.262417216			

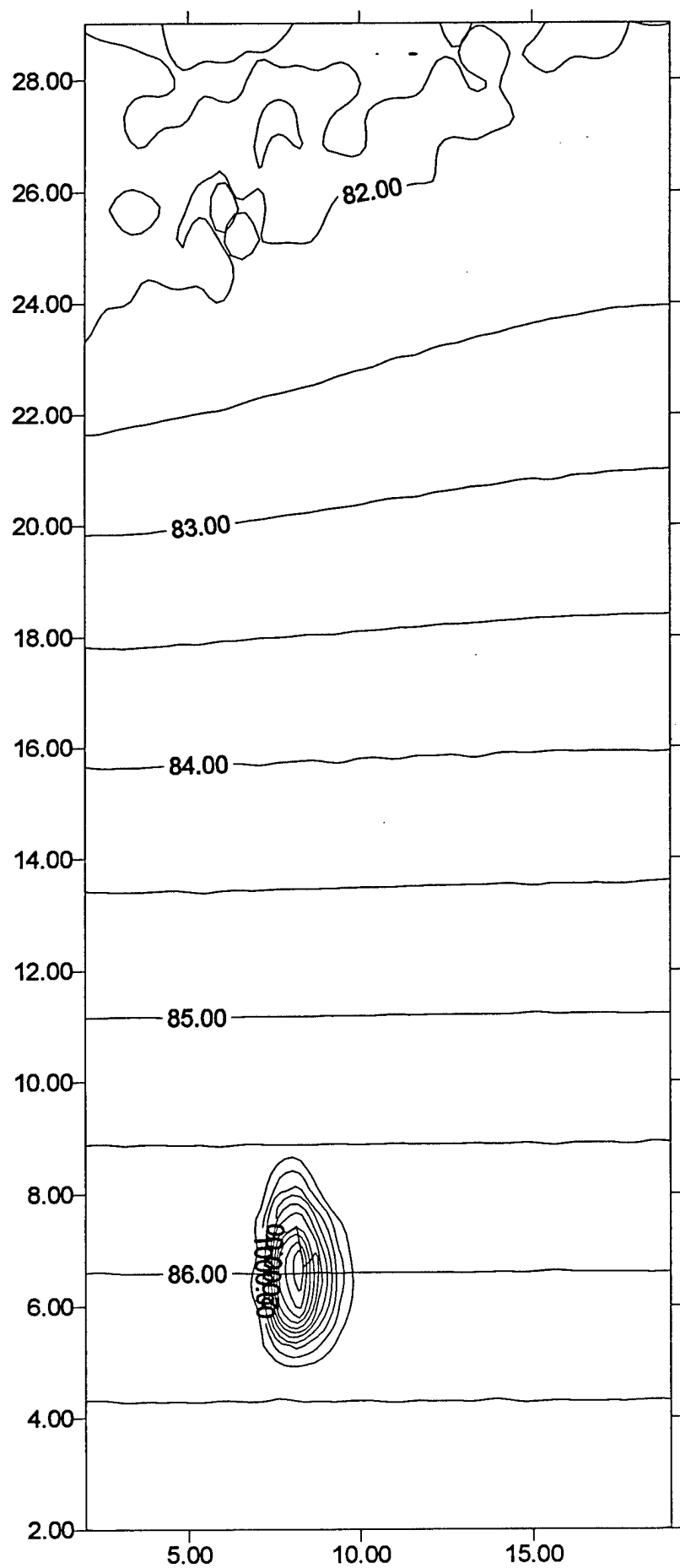
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	28.3606218	12.32438089	2.301180242	0.037266777	1.927430217	54.79381338	1.927430217	54.79381338
X Variable 1	0.666287568	0.142713232	4.668716129	0.000362007	0.360197855	0.97237728	0.360197855	0.97237728

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals	Standard Residuals
1	86.46311865	-0.333218654	-1.103779508
2	86.01892694	-0.106736942	-0.353563787
3	85.75685383	-0.061543832	-0.203862598
4	85.50810647	-0.031226473	-0.103437011
5	85.66357357	0.247786427	0.820787126
6	86.35207073	-0.005050726	-0.016730418
7	85.94341435	-0.031674351	-0.104920595
8	86.12775391	-0.431013911	-1.427724161
9	85.71465562	-0.235705619	-0.780769713
10	85.2815687	-0.0209087	-0.069259613
11	85.24159145	0.013988554	0.046336778
12	85.96118202	0.602947981	1.997252008
13	86.36095456	0.63904544	2.116824054
14	85.78128438	-0.086434376	-0.286311982
15	86.15440541	-0.241525414	-0.800047655
16	86.0477994	0.081270597	0.269207076

Seymour Johnson AFB
Head Comparison
Setup-2

Well	Cell (X,Y)	Groundwater	Groundwater	Groundwater	Average Elevation	Model Elevation
		Elevation April,26	Elevation May,18	Elevation July,19		
MW-2	(13,7)	87.04	87.78	87.5	87.44	85.91219
MW-3	(14,6)	87.09	86.92	87.6	87.20333333	86.1299
MW-4	(13,7)	86.51	86.21	86.89	86.53666667	85.91219
MW-5	(14,8)	86.13	85.86	86.44	86.14333333	85.69531
MW-6	(12,9)	85.82	85.55	85.94	85.77	85.47688
MW-7	(11,7)	86	85.73	86.28	86.00333333	85.91136
MW-8	(12,5)	86.89	86.82	87.4	87.03666667	86.34702
MW-11	(12,7)	86.39	86.14	86.74	86.42333333	85.91174
MW-14	(18,8)			86.7	86.7	85.69674
MW-15	(15,9)			86.08	86.08	85.47895
MW-16	(13,10)			85.43	85.43	85.26066
MW-17	(8,10)			85.37	85.37	85.25558
MW-18	(8,4)			86.45	86.45	86.56413
MW-19	(10,2)			87.05	87.05	87
CPT-16	(13,8)	86.18	85.9	86.46	86.18	85.69485
CPT-17	(15,7)	86.64	86.47	87.11	86.74	85.91288
CPT-18	(11,6)	86.72	86.56	86.46	86.58	86.12907
CPT-19	(14,5)	85.08	85.01	84.97	85.02	86.3474



Seymour Johnson AFB Setup-2, Initial Steady-state Conditions

ESTIMATION OF LONGITUDINAL DISPERSIVITY

Assumptions: A. Plume migration is sufficiently aligned along the longitudinal axis of the grid to calculate a longitudinal moment.

B. Longitudinal dispersivity is 1/10 of the distance from the contaminant source to the center of contamination.

From Appendix D2, an estimate for the center of mass along the plume center line will be taken by calculating the longitudinal moment around MW-13, which is near the source of contamination.

Mass (ug/l)	Distance From MW-13 (ft)	Mass x Distance (ug-ft/L)
13,800	67	924,600
10,000	90	900,000
8,860	93	823,980
1,000	108	108,000
26	135	3,510
10	190	1,900
Totals: 33,696		2,761,990

Now, estimate the longitudinal centroid of the plume:

$\Sigma(\text{mass} \times \text{distance}) / \Sigma(\text{mass})$ in feet: 81.97
 Estimated distance from cell (10,3) to the centroid in feet: 81.97
 Estimated Longitudinal Dispersivity (Dist. x 0.1) in feet: 8.20

APPENDIX D

BIOPLUME II MODEL OUTPUT

APPENDIX E

ANALYTICAL MODELS

APPENDIX E

ANALYTICAL MODELS

One-dimensional analytical models based on the works of Bear (1979) and vanGenuchten and Alves (1982) were used during the modeling effort. The models incorporate advection, dispersion, retardation, and first-order decay in order to simulate one-dimensional contaminant fate and transport. Analytical models were first used to screen potential value ranges for select parameters prior to incorporation into the Bioplume II model. Afterwards, analytical model results were used for comparison to calibrated and predictive Bioplume II models to help confirm the results of the numerical models. Analytical model results are presented in Appendix F.

To verify the results of model SETUP16, Parsons ES compared numerical results obtained from Bioplume II to results obtained from a steady-state one-dimensional analytical model (Bear, 1979), which incorporates one-dimensional advection, dispersion, retardation, and first-order decay. Using hydrogeologic parameters and contaminant decay kinetics as calibrated in the numerical model, the analytical model predicted dissipation of the BTEX plume within 400 feet of the source area.

Source decay combined with the contaminant decay kinetics and hydrogeologic parameters used to calibrate the numerical model was used in a one-dimensional analytical model to verify the Bioplume II model results for model SR5. Assuming a 95-percent reduction of BTEX concentration at the source over the 5-year source removal time frame, the first-order decay coefficient for the BTEX source is $0.000028 \text{ day}^{-1}$. The selected analytical model (vanGenuchten and Alves, 1982) incorporates advection, dispersion, retardation, and first-order decay of both the source and the solute concentrations. Results from this analytical model, were compared to BTEX concentrations observed from the 1995 data and the numerical model results from Bioplume II. This model predicted that the creek would never be impacted. Using a BTEX decay rate of 0.00359 day^{-1} (which is approximately equal to the calibrated decay rate in the Bioplume II numerical models), the maximum predicted BTEX concentration at the creek was $2 \times 10^{-7} \mu\text{g/L}$.

Bioplume II results for model SR3 were compared to results from the analytical model described above using a BTEX source decay rate of $0.0000468 \text{ day}^{-1}$. This rate assumes a 95-percent reduction of BTEX concentration at the source over the 3-year source removal time frame. The one-dimensional analytical model results using this source decay coefficient were nearly identical to those compared to model SR5; however, as would be expected, the model with the more rapid source decay rate also predicts BTEX concentrations decaying toward zero more rapidly.

First-Order Rate Constant Calculation
Calculated Along the Primary Southeastern Groundwater Flow Path
Using 0.005 ft/ft Gradient
Former AGE Fueling Facility Site Intrinsic Remediation EE/CA
Seymour Johnson AFB, North Carolina

Compound	Monitoring Point Location							
	MW-13 Measured Concentration (µg/L)	MW-13 Equilibrium Concentration ^{a/} (µg/L)	MW-4 Measured Concentration (µg/L)	MW-4 Corrected Concentration ^{b/} (µg/L)	First Order Rate Constant Between B and C ^{c/} (week ⁻¹)	CPT-16 Measured Concentration (µg/L)	CPT-16 Corrected Concentration ^{b/} (µg/L)	First Order Rate Constant Between C and D ^{c/} (week ⁻¹)
benzene	1000000	9280	2300	1361	0.0251	2100	3216	-0.0089
toluene	3500000	8490	3300	1953	0.0192	2100	3216	0.0007
ethylbenzene	2300000	670	1100	651	0.0004	560	858	0.0066
Total xylenes	7300000	1171	7100	4202	-0.0167	4100	6278	0.0033
Total BTEX	14100000	19611	13800	8167	0.0114	8860	13568	0.0004
trimethylbenzene	10000000	870	1470	870		960	1470	
^{a/} Corrected for LNAPL in sample by methods in Wiedemeier et al. (1995).								
^{b/} See text for calculation of corrected concentration.								
^{c/} See text for calculation of first order rate constant.								
							Overall Maximum	0.0251
							Overall Minimum	-0.0167
							Overall Average	0.0041

**RATE CONSTANT CALCULATIONS
FORMER AGE FUELING FACILITY SITE
INTRINSIC REMEDIATION EE/CA
SEYMOUR JOHNSON AFB, NORTH CAROLINA**

Compound	Y Intercept (b) ^{a/}	Slope ^{a/}	R ² ^{a/}	First-order Rate Constant ^{a/} (day ⁻¹)
Benzene ^{b/}	877520	-0.0327	0.96	0.0016
Toluene ^{b/}	5501224	-0.0459	0.95	0.0019
Ethylbenzene ^{b/}	3004431	-0.0478	0.96	0.0019
Xylene ^{b/}	16509596	-0.0505	0.92	0.0019
Total BTEX ^{b/}	14896685	-0.0406	0.97	0.0018
Overall Maximum:				0.0019
Overall Minimum:				0.0016
Overall Average:				0.0018

^{a/} Calculated by linear regression of site data using Buscheck and Alcantar (1995) method.

^{b/} Calculated by using data from MW-4, MW-6, MW-13, and CPT-16

DATA USED FOR FIRST-ORDER RATE CONSTANT CALCULATIONS
FORMER AGE FUELING FACILITY SITE
INTRINSIC REMEDIATION EE/CA
SEYMOUR JOHNSON AFB, NORTH CAROLINA

Sample Location	Distance Downgradient	Travel Time from Location MW-13	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
MW-13	0	0	1000000	3500000	2300000	7300000	14100000
MW-4	67	536	2300	3300	1100	7100	13800
CPT-16	94	752	2100	2100	560	4100	8860
MW-6	135	1080	25	1	0.4	0.4	26.8

Log Data

FUEL HYDROCARBON COMPOUNDS DETECTED IN GROUNDWATER FORMER AGE FUELING FACILITY SITE INTRINSIC REMEDIATION EE/CA SEYMOUR JOHNSON AFB, NORTH CAROLINA

Sample Location	Distance Downgradient	Travel Time from Location MW-13	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
MW-13	0	0	6.00	6.544	6.36	6.86	7.15
MW-4	67	536	3.36	3.519	3.04	3.85	4.14
CPT-16	94	752	3.32	3.322	2.75	3.61	3.95
MW-6	135	1080	1.40	0.000	-0.40	-0.40	1.43

velocity (ft/day)= 0.125

benzene

0	6.00
67	3.36
94	3.32
135	1.40

toluene

0	6.544068044
67	3.51851394
94	3.322219295
135	0

ethylbenzene

0	6.361727836
67	3.041392685
94	2.748188027
135	-0.39794001

xylenes

0	6.86332286
67	3.851258349
94	3.612783857
135	-0.39794001

BTEX

0	7.15
67	4.14
94	3.95
135	1.43

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.984149
R Square	0.96855
Adjusted	0.952825
Standard	0.508507
Observati	4

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>gnificance F</i>
Regressio	1	15.9268	15.9268	61.59337	0.015851
Residual	2	0.517159	0.25858		
Total	3	16.44396			

	<i>Coefficient</i>	<i>ndard Err</i>	<i>t Stat</i>	<i>P-value</i>	<i>ower 95</i>	<i>pper 95</i>	<i>ower 95.0</i>	<i>pper 95.0</i>
Intercept	7.17309	0.459826	15.59958	0.004084	5.194618	9.151562	5.194618	9.151562
X Variabl	-0.04063	0.005178	-7.84814	0.015851	-0.06291	-0.01836	-0.06291	-0.01836

RESIDUAL OUTPUT

<i>bservatio</i>	<i>redicted</i>	<i>Residuals</i>
1	7.17309	-0.02387
2	4.450605	-0.31073
3	3.353485	0.593949
4	1.687487	-0.25935

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.982214
R Square	0.964744
Adjusted	0.947116
Standard	0.434664
Observati	4

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>gnificance F</i>
Regressio	1	10.33984	10.33984	54.72749	0.017786
Residual	2	0.377866	0.188933		
Total	3	10.71771			

	<i>Coefficient</i>	<i>ndard Err</i>	<i>t Stat</i>	<i>P-value</i>	<i>ower 95</i>	<i>pper 95</i>	<i>ower 95.0</i>	<i>pper 95.0</i>
Intercept	5.943257	0.393052	15.12079	0.004345	4.252089	7.634425	4.252089	7.634425
X Variabl	-0.03274	0.004426	-7.3978	0.017786	-0.05178	-0.0137	-0.05178	-0.0137

RESIDUAL OUTPUT

<i>bservatio</i>	<i>redicted</i>	<i>Residuals</i>
1	5.943257	0.056743
2	3.749654	-0.38793
3	2.865665	0.456554
4	1.523311	-0.12537

SUMMARY OUTPUT

<u>Regression Statistics</u>	
Multiple R	0.972604
R Square	0.945958
Adjusted	0.918937
Standard	0.761379
Observati	4

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>gnificance F</i>
Regressio	1	20.29429	20.29429	35.00838	0.027396
Residual	2	1.159396	0.579698		
Total	3	21.45368			

	<i>Coefficient</i>	<i>ndard Err</i>	<i>t Stat</i>	<i>P-value</i>	<i>ower 95</i>	<i>pper 95</i>	<i>ower 95.0</i>	<i>pper 95.0</i>
Intercept	6.740459	0.688489	9.790223	0.010273	3.778129	9.70279	3.778129	9.70279
X Variabl	-0.04587	0.007752	-5.91679	0.027396	-0.07922	-0.01251	-0.07922	-0.01251

RESIDUAL OUTPUT

<i>bservatio</i>	<i>redicted</i>	<i>Residuals</i>
1	6.740459	-0.19639
2	3.667279	-0.14876
3	2.428833	0.893386
4	0.54823	-0.54823

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.981711
R Square	0.963756
Adjusted	0.945634
Standard	0.64416
Observati	4

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>gnificance F</i>
Regressio	1	22.06724	22.06724	53.18142	0.018289
Residual	2	0.829885	0.414943		
Total	3	22.89713			

	<i>Coefficient</i>	<i>ndard Err</i>	<i>t Stat</i>	<i>P-value</i>	<i>ower 95</i>	<i>pper 95</i>	<i>ower 95.0</i>	<i>pper 95.0</i>
Intercept	6.477762	0.582492	11.12077	0.007989	3.971499	8.984026	3.971499	8.984026
X Variabl	-0.04783	0.006559	-7.29256	0.018289	-0.07605	-0.01961	-0.07605	-0.01961

RESIDUAL OUTPUT

<i>bservatio</i>	<i>redicted</i>	<i>Residuals</i>
1	6.477762	-0.11603
2	3.273152	-0.23176
3	1.981742	0.766446
4	0.020712	-0.41865

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.960418
R Square	0.922403
Adjusted	0.883605
Standard	1.016671
Observati	4

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>gnificance F</i>
Regressio	1	24.5735	24.5735	23.77422	0.039582
Residual	2	2.067239	1.03362		
Total	3	26.64073			

	<i>Coefficient</i>	<i>ndard Err</i>	<i>t Stat</i>	<i>P-value</i>	<i>ower 95</i>	<i>pper 95</i>	<i>ower 95.0</i>	<i>pper 95.0</i>
Intercept	7.217364	0.919341	7.850588	0.015841	3.261758	11.17297	3.261758	11.17297
X Variabl	-0.05047	0.010352	-4.87588	0.039582	-0.09501	-0.00593	-0.09501	-0.00593

RESIDUAL OUTPUT

<i>bservatio</i>	<i>redicted</i>	<i>Residuals</i>
1	7.217364	-0.35404
2	3.835668	0.01559
3	2.472895	1.139889
4	0.403498	-0.80144

**STEADY-STATE SOLUTION TO THE ADVECTIVE-DISPERSIVE EQUATION
ONE DIMENSIONAL FLOW, TYPE ONE BOUNDARY CONDITION
(CONSTANT SOURCE WITH 0.00359 DAY-1 FIRST-ORDER DECAY)
PRIMARY SOUTHEASTERN FLOW PATH TOWARD CREEK**

Hydrogeologic Data

Hydraulic conductivity	$K := 8.68 \cdot 10^{-5} \cdot \frac{\text{ft}}{\text{sec}}$	$K = 7.5 \cdot \frac{\text{ft}}{\text{day}}$
Hydraulic gradient	$I := 0.005 \cdot \frac{\text{ft}}{\text{ft}}$	
Effective porosity (Baker, 1994)	$n_e := 0.30$	
Total porosity	$n := 0.30$	
Longitudinal dispersivity (Parsons ES, 1985)	$\alpha_x := 8.2 \cdot \text{ft}$	

Retardation Coefficient Calculation

Maximum Contaminant Concentration	$C_o := 141 \cdot \frac{\text{mg}}{\text{liter}}$	
Contaminant Decay Rate	$\lambda := .00359 \cdot \frac{1}{\text{day}}$	
Minimum soil sorption coefficient (Wiedemeier et al., 1994)	$K_{oc} := 79 \cdot \frac{\text{mL}}{\text{gm}}$	
Particle mass density (Freeze and Cherry, 1979)	$\rho_s := 2.28 \cdot \frac{\text{gm}}{\text{cm}^3}$	
Bulk density (Freeze and Cherry, 1979)	$\rho_b := \rho_s \cdot (1 - n)$	$\rho_b = 1.596 \cdot \frac{\text{gm}}{\text{cm}^3}$
Minimum organic carbon content	$f_{oc} := 0.06 \cdot \%$	
Retardation coefficient	$R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$	$R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water)	$v_x := \frac{K \cdot I}{n_e}$	$v_x = 45.652 \cdot \frac{\text{ft}}{\text{yr}}$
Contaminant velocity	$v_c := \frac{v_x}{R}$	$v_c = 36.459 \cdot \frac{\text{ft}}{\text{yr}}$
Longitudinal dispersion coefficient	$D_x := \alpha_x \cdot v_x$	$D_x = 1.025 \cdot \frac{\text{ft}^2}{\text{day}}$

The measured distance from MW-13 (the center of the source area) to the Drainage Creek is 850 feet. This analytical solution is used to confirm Bioplume II predicted concentrations.

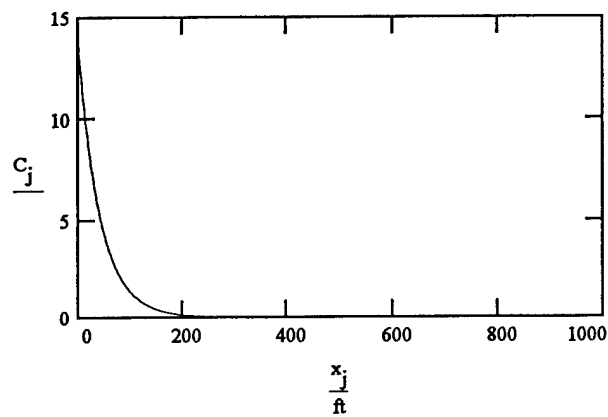
$$j := 0..850$$

$$\Delta x := 1 \cdot \text{ft}$$

$$x_j := \Delta x \cdot j$$

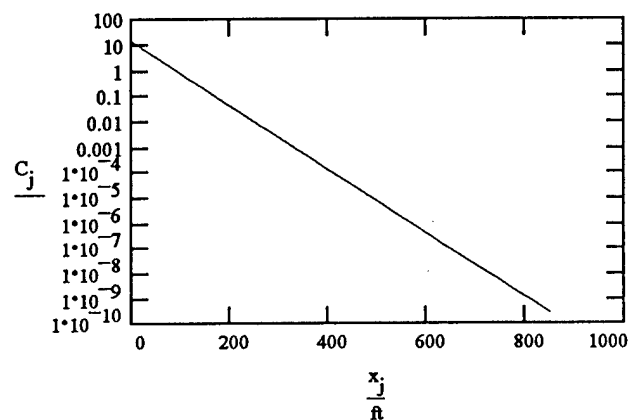
For Unretarded Flow with Biodegradation (Bear, 1979, p. 642, Domenico and Schwartz, 1990)

$$C_j := (C_o) \cdot 1000 \cdot \exp \left[\frac{x_j}{2 \cdot a_x} \cdot \left[1 - \sqrt{1 + \frac{4 \cdot \lambda \cdot a_x}{(v_x)}} \right] \right] \text{ in mg/L.}$$



For Retarded Flow with Biodegradation (Wexler, 1992 p. 20, eq. 62)

$$C_j := C_o \cdot 1000 \cdot \exp \left[\frac{x_j}{2 \cdot \frac{D_x}{R}} \cdot \left[\frac{v_x}{R} - \sqrt{\left(\frac{v_x}{R} \right)^2 + 4 \cdot \lambda \cdot \frac{D_x}{R}} \right] \right] \text{ in mg/L.}$$



**STEADY-STATE SOLUTION TO THE ADVECTIVE-DISPERSIVE EQUATION
ONE DIMENSIONAL FLOW, TYPE ONE BOUNDARY CONDITION
(CONSTANT SOURCE WITH 0.00059 DAY-1 FIRST-ORDER DECAY)
PRIMARY SOUTHEASTERN FLOW PATH TOWARD CREEK**

Hydrogeologic Data

Hydraulic conductivity	$K := 8.68 \cdot 10^{-5} \cdot \frac{\text{ft}}{\text{sec}}$	$K = 7.5 \cdot \frac{\text{ft}}{\text{day}}$
Hydraulic gradient	$I := 0.005 \cdot \frac{\text{ft}}{\text{ft}}$	
Effective porosity (Baker, 1994)	$n_e := 0.30$	
Total porosity	$n := 0.30$	
Longitudinal dispersivity (Parsons ES, 1985)	$\alpha_x := 82 \cdot \text{ft}$	

Retardation Coefficient Calculation

Maximum Contaminant Concentration	$C_o := 141 \cdot \frac{\text{mg}}{\text{liter}}$	
Contaminant Decay Rate	$\lambda := 0.00059 \cdot \frac{1}{\text{day}}$	
Minimum soil sorption coefficient (Wiedemeier et al., 1994)	$K_{oc} := 79 \cdot \frac{\text{mL}}{\text{gm}}$	
Particle mass density (Freeze and Cherry, 1979)	$\rho_s := 2.28 \cdot \frac{\text{gm}}{\text{cm}^3}$	
Bulk density (Freeze and Cherry, 1979)	$\rho_b := \rho_s \cdot (1 - n)$	$\rho_b = 1.596 \cdot \frac{\text{gm}}{\text{cm}^3}$
Minimum organic carbon content	$f_{oc} := 0.06\%$	
Retardation coefficient	$R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$	$R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water)	$v_x := \frac{K \cdot I}{n_e}$	$v_x = 45.652 \cdot \frac{\text{ft}}{\text{yr}}$
Contaminant velocity	$v_c := \frac{v_x}{R}$	$v_c = 36.459 \cdot \frac{\text{ft}}{\text{yr}}$
Longitudinal dispersion coefficient	$D_x := \alpha_x \cdot v_x$	$D_x = 1.025 \cdot \frac{\text{ft}^2}{\text{day}}$

The measured distance from MW-13 (the center of the source area) to the Drainage Creek is 850 feet. This analytical solution is used to confirm Bioplume II predicted concentrations.

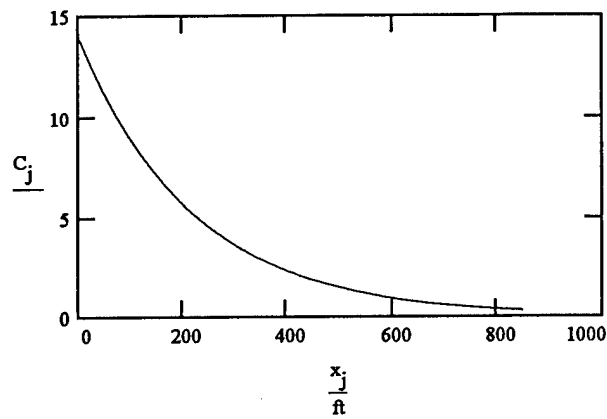
$$j := 0..850$$

$$\Delta x := 1 \cdot \text{ft}$$

$$x_j := \Delta x \cdot j$$

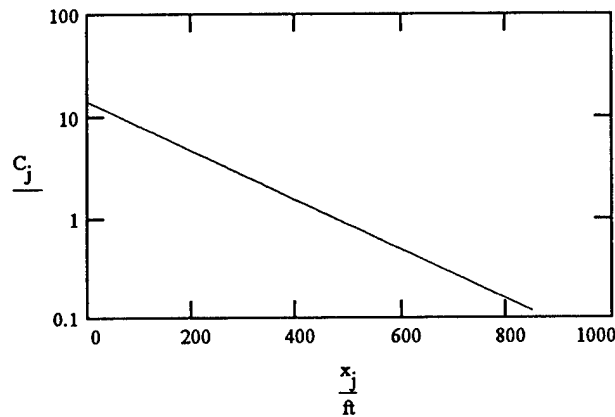
For Unretarded Flow with Biodegradation (Bear, 1979, p. 642, Domenico and Schwartz, 1990)

$$C_j := (C_o) \cdot 1000 \cdot \exp \left[\frac{x_j}{2 \cdot a_x} \cdot \left[1 - \sqrt{1 + \frac{4 \cdot \lambda \cdot a_x}{(v_x)}} \right] \right] \text{ in mg/L.}$$



For Retarded Flow with Biodegradation (Wexler, 1992 p. 20, eq. 62)

$$C_j := C_o \cdot 1000 \cdot \exp \left[\frac{x_j}{2 \cdot \frac{D_x}{R}} \cdot \left[\frac{v_x}{R} - \sqrt{\left(\frac{v_x}{R} \right)^2 + 4 \cdot \lambda \cdot \frac{D_x}{R}} \right] \right] \text{ in mg/L.}$$



PARSONS ENGINEERING SCIENCE, INC.

Client Seymour Johnson AFB

Job No. 722450.76030

Sheet 1 of

Subject First Order Decay Coefficient

By TCR

Date 9/11/95

Checked

Rev.

$$\frac{C}{C_0} = e^{-\alpha t}$$

Assume $\frac{C}{C_0} = 0.95$

time: 3 yrs = 1096 days
5 yrs = 1826 days

$$0.95 = e^{-\alpha (1096 \text{ days})}$$

$$-0.05 = -\alpha (1096 \text{ days})$$

$$\alpha = 0.0000468 \text{ day}^{-1} \quad (\text{SR 3})$$

$$0.95 = e^{-\alpha (1826 \text{ days})}$$

$$-0.05 = -\alpha (1826 \text{ days})$$

$$\alpha = 0.0000281 \text{ day}^{-1} \quad (\text{SR 5})$$

Transient Solution to the Advective-Dispersive Equation for One-Dimensional Flow, Type Three Boundary Condition (Decaying Source, Constant Location, Variable Time, Solution of van Genuchten and Alves, 1982) - Checked against Solute ONE3-D by THW 1/5/95 Primary Southeastern Flow Path to Creek

Hydrogeologic Data

Hydraulic conductivity	$K := 75 \frac{\text{ft}}{\text{day}}$
Hydraulic gradient	$I := 0.005 \frac{\text{ft}}{\text{ft}}$
Effective porosity	$n_e := 0.3$
Total porosity	$n := 0.3$
Longitudinal dispersivity (EPRI, 1985)	$\alpha_x := 82 \text{ ft}$
Concentration of Injected Contaminant	$C_s := 138 \frac{\text{mg}}{\text{liter}}$
Initial Dissolved Contaminant Concentration	$C_o := 0 \frac{\text{mg}}{\text{liter}}$

Retardation Coefficient Calculation

Solute Decay Rate	$\lambda := 0.00059 \frac{1}{\text{day}}$	
Source Decay Rate	$\gamma := 0.0000281 \frac{1}{\text{day}}$	
Soil sorption coefficient (EPA, 1990)	$K_{oc} := 79 \frac{\text{mL}}{\text{gm}}$	
Bulk density (Freeze and Cherry, 1979)	$\rho_b := 1.596 \frac{\text{gm}}{\text{cm}^3}$	
Organic carbon content	$f_{oc} := 0.06\%$	
Retardation coefficient	$R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$	$R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water)	$v_x := \frac{K \cdot I}{n_e}$	$v_x = 0.125 \frac{\text{ft}}{\text{day}}$
Contaminant velocity	$v_c := \frac{v_x}{R}$	$v_c = 0.1 \frac{\text{ft}}{\text{day}}$
Longitudinal dispersion coefficient	$D_x := \alpha_x \cdot v_x$	$D_x = 1.025 \frac{\text{ft}^2}{\text{day}}$

Initial Plume Distribution Calculation

$$\text{year} := 365 \cdot \text{day} \quad i := 1..100$$

$$x := 850 \cdot \text{ft}$$

$$\Delta t := 1 \cdot \text{year}$$

$$ug := \frac{\text{mg}}{1000}$$

$$t_i := \Delta t \cdot i$$

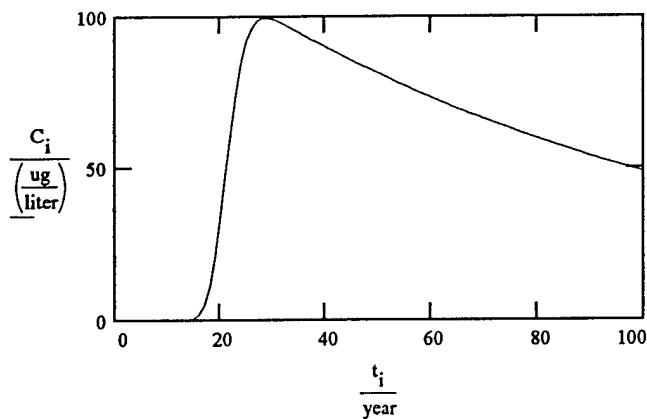
For Retarded Flow with Biodegradation and a Decaying Source (van Genuchten and Alves, 1982)

$$C_i := C_0 \cdot \exp(-\lambda \cdot t_i) \cdot \left[1 - \frac{1}{2} \cdot \left(1 - \operatorname{erf} \left(\frac{R \cdot x - v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) - \frac{v_x^2 \cdot t_i}{\pi \cdot D_x \cdot R} \cdot \exp \left[-\frac{(R \cdot x - v_x \cdot t_i)^2}{4 \cdot D_x \cdot R \cdot t_i} \right] + \frac{1}{2} \cdot \left(1 + \frac{v_x \cdot x}{D_x} + \frac{v_x^2 \cdot t_i}{D_x \cdot R} \right) \cdot \exp \left(\frac{v_x \cdot x}{D_x} \right) \cdot \left(1 - \operatorname{erf} \left(\frac{R \cdot x + v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right] \dots$$

$$+ C_s \cdot \exp(-\gamma \cdot t_i) \cdot \left[\frac{v_x}{v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \cdot \exp \left[\frac{v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \cdot x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf} \left(\frac{R \cdot x - t_i \cdot v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right] \dots \right.$$

$$+ \left[\frac{v_x}{v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \cdot \exp \left[\frac{v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \cdot x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf} \left(\frac{R \cdot x + t_i \cdot v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right] \dots \right.$$

$$\left. + \frac{v_x^2}{2 \cdot D_x \cdot R \cdot (\lambda - \gamma)} \cdot \exp \left[\frac{v_x \cdot x}{D_x} - (\lambda - \gamma) \cdot t_i \right] \cdot \left(1 - \operatorname{erf} \left(\frac{R \cdot x + v_x \cdot t_i}{2 \cdot \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right]$$



Transient Solution to the Advective-Dispersive Equation for One-Dimensional Flow, Type Three Boundary Condition (Decaying Source, Constant Location, Variable Time, Solution of van Genuchten and Alves, 1982) - Checked against Solute ONE3-D by THW 1/5/95 Primary Southeastern Flow Path to Creek

Hydrogeologic Data

Hydraulic conductivity	$K := 75 \frac{\text{ft}}{\text{day}}$
Hydraulic gradient	$I := 0.005 \frac{\text{ft}}{\text{ft}}$
Effective porosity	$n_e := 0.3$
Total porosity	$n := 0.3$
Longitudinal dispersivity (EPRI, 1985)	$\alpha_x := 82 \text{ ft}$
Concentration of Injected Contaminant	$C_s := 138 \frac{\text{mg}}{\text{liter}}$
Initial Dissolved Contaminant Concentration	$C_o := 0. \frac{\text{mg}}{\text{liter}}$

Retardation Coefficient Calculation

Solute Decay Rate	$\lambda := 0.00359 \frac{1}{\text{day}}$	
Source Decay Rate	$\gamma := 0.0000281 \frac{1}{\text{day}}$	
Soil sorption coefficient (EPA, 1990)	$K_{oc} := 79. \frac{\text{mL}}{\text{gm}}$	
Bulk density (Freeze and Cherry, 1979)	$\rho_b := 1.596 \frac{\text{gm}}{\text{cm}^3}$	
Organic carbon content	$f_{oc} := 0.06\%$	
Retardation coefficient	$R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$	$R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water)	$v_x := \frac{K \cdot I}{n_e}$	$v_x = 0.125 \frac{\text{ft}}{\text{day}}$
Contaminant velocity	$v_c := \frac{v_x}{R}$	$v_c = 0.1 \frac{\text{ft}}{\text{day}}$
Longitudinal dispersion coefficient	$D_x := \alpha_x \cdot v_x$	$D_x = 1.025 \frac{\text{ft}^2}{\text{day}}$

Initial Plume Distribution Calculation

$$\text{year} := 365\text{-day} \quad i := 1..100$$

$$x := 850\text{-ft}$$

$$\Delta t := 1\text{-year}$$

$$ug := \frac{mg}{1000}$$

$$t_i := \Delta t \cdot i$$

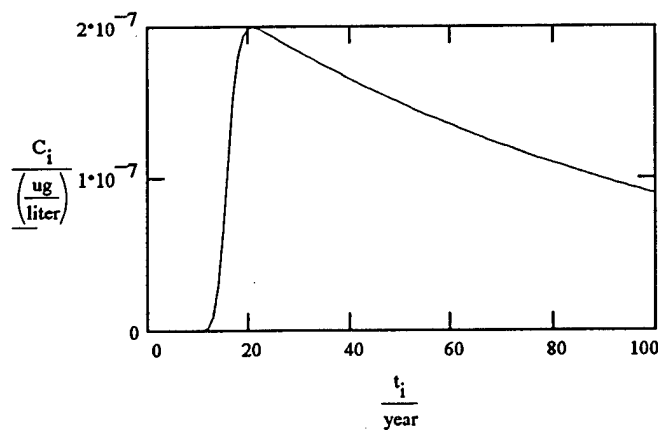
For Retarded Flow with Biodegradation and a Decaying Source (van Genuchten and Alves, 1982)

$$C_i := C_o \cdot \exp(-\lambda \cdot t_i) \cdot \left[1 - \frac{1}{2} \left(1 - \operatorname{erf} \left(\frac{R \cdot x - v_x \cdot t_i}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right) - \left(\frac{v_x^2 \cdot t_i}{\pi \cdot D_x \cdot R} \right) \cdot \exp \left[-\frac{(R \cdot x - v_x \cdot t_i)^2}{4 \cdot D_x \cdot R \cdot t_i} \right] + \frac{1}{2} \left(1 + \frac{v_x \cdot x}{D_x} + \frac{v_x^2 \cdot t_i}{D_x \cdot R} \right) \cdot \exp \left(\frac{v_x \cdot x}{D_x} \right) \cdot \left(1 - \operatorname{erf} \left(\frac{R \cdot x + v_x \cdot t_i}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right] \dots$$

$$+ C_s \cdot \exp(-\gamma \cdot t_i) \cdot \left[\frac{v_x}{v_x + v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \cdot \exp \left[\frac{v_x - v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \cdot D_x} \cdot x \right] \cdot \left[1 - \operatorname{erf} \left(\frac{R \cdot x - t_i \cdot v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right] \dots \right.$$

$$+ \left[\frac{v_x}{v_x - v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \cdot \exp \left[\frac{v_x + v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \cdot D_x} \cdot x \right] \cdot \left[1 - \operatorname{erf} \left(\frac{R \cdot x + t_i \cdot v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right] \dots \right.$$

$$\left. + \left[\frac{v_x^2}{2 \cdot D_x \cdot R \cdot (\lambda - \gamma)} \right] \cdot \exp \left[\frac{v_x \cdot x}{D_x} - (\lambda - \gamma) \cdot t_i \right] \cdot \left(1 - \operatorname{erf} \left(\frac{R \cdot x + v_x \cdot t_i}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right]$$



Transient Solution to the Advective-Dispersive Equation for One-Dimensional Flow, Type Three Boundary Condition (Decaying Source, Constant Location, Variable Time, Solution of van Genuchten and Alves, 1982) - Checked against Solute ONE3-D by THW 1/5/95 Primary Southeastern Flow Path to Creek, 3 yr

Hydrogeologic Data

Hydraulic conductivity	$K := 7.5 \frac{\text{ft}}{\text{day}}$
Hydraulic gradient	$I := 0.005 \frac{\text{ft}}{\text{ft}}$
Effective porosity	$n_e := 0.3$
Total porosity	$n := 0.3$
Longitudinal dispersivity (EPRI, 1985)	$\alpha_x := 8.2 \text{ ft}$
Concentration of Injected Contaminant	$C_s := 138 \frac{\text{mg}}{\text{liter}}$
Initial Dissolved Contaminant Concentration	$C_o := 0 \frac{\text{mg}}{\text{liter}}$

Retardation Coefficient Calculation

Solute Decay Rate	$\lambda := 0.00059 \frac{1}{\text{day}}$	
Source Decay Rate	$\gamma := 0.000468 \frac{1}{\text{day}}$	
Soil sorption coefficient (EPA, 1990)	$K_{oc} := 79 \frac{\text{mL}}{\text{gm}}$	
Bulk density (Freeze and Cherry, 1979)	$\rho_b := 1.596 \frac{\text{gm}}{\text{cm}^3}$	
Organic carbon content	$f_{oc} := 0.06\%$	
Retardation coefficient	$R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$	$R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water)	$v_x := \frac{K \cdot I}{n_e}$	$v_x = 0.125 \frac{\text{ft}}{\text{day}}$
Contaminant velocity	$v_c := \frac{v_x}{R}$	$v_c = 0.1 \frac{\text{ft}}{\text{day}}$
Longitudinal dispersion coefficient	$D_x := \alpha_x \cdot v_x$	$D_x = 1.025 \frac{\text{ft}^2}{\text{day}}$

Initial Plume Distribution Calculation

year := 365-day i := 1..100

x := 850-ft

Δt := 1-year

ug := $\frac{\text{mg}}{1000}$

t_i := Δt · i

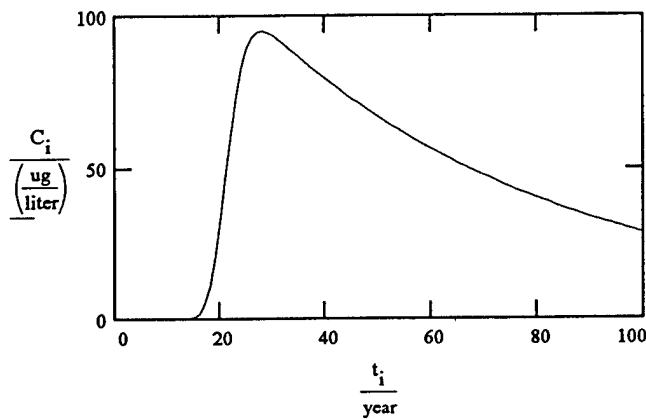
For Retarded Flow with Biodegradation and a Decaying Source (van Genuchten and Alves, 1982)

$$C_i := C_o \cdot \exp(-\lambda \cdot t_i) \cdot \left[1 - \frac{1}{2} \left(1 - \operatorname{erf} \left(\frac{R \cdot x - v_x \cdot t_i}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right) - \left(\frac{v_x^2 \cdot t_i}{x \cdot D_x \cdot R} \right) \cdot \exp \left[-\frac{(R \cdot x - v_x \cdot t_i)^2}{4 \cdot D_x \cdot R \cdot t_i} \right] + \frac{1}{2} \left(1 + \frac{v_x \cdot x}{D_x} + \frac{v_x^2 \cdot t_i}{D_x \cdot R} \right) \cdot \exp \left(\frac{v_x \cdot x}{D_x} \right) \cdot \left(1 - \operatorname{erf} \left(\frac{R \cdot x + v_x \cdot t_i}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right] \dots$$

$$+ C_s \cdot \exp(-\gamma \cdot t_i) \cdot \left[\frac{v_x}{v_x + v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \cdot \exp \left[\frac{v_x - v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \cdot x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf} \left(\frac{R \cdot x - t_i \cdot v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right] \dots \right.$$

$$+ \left[\frac{v_x}{v_x - v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \cdot \exp \left[\frac{v_x + v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \cdot x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf} \left(\frac{R \cdot x + t_i \cdot v_x' \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right] \dots \right.$$

$$\left. + \left[\frac{v_x^2}{2 \cdot D_x \cdot R \cdot (\lambda - \gamma)} \right] \cdot \exp \left[\frac{v_x \cdot x}{D_x} - (\lambda - \gamma) \cdot t_i \right] \cdot \left(1 - \operatorname{erf} \left(\frac{R \cdot x + v_x \cdot t_i}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right]$$



Transient Solution to the Advective-Dispersive Equation for One-Dimensional Flow, Type Three Boundary Condition (Decaying Source, Constant Location, Variable Time, Solution of van Genuchten and Alves, 1982) - Checked against Solute ONE3-D by THW 1/5/95 Primary Southeastern Flow Path to Creek, 3yr

Hydrogeologic Data

Hydraulic conductivity	$K := 7.5 \frac{\text{ft}}{\text{day}}$
Hydraulic gradient	$I := 0.005 \frac{\text{ft}}{\text{ft}}$
Effective porosity	$n_e := 0.3$
Total porosity	$n := 0.3$
Longitudinal dispersivity (EPRI, 1985)	$\alpha_x := 8.2 \text{ ft}$
Concentration of Injected Contaminant	$C_s := 13.8 \frac{\text{mg}}{\text{liter}}$
Initial Dissolved Contaminant Concentration	$C_o := 0. \frac{\text{mg}}{\text{liter}}$

Retardation Coefficient Calculation

Solute Decay Rate	$\lambda := 0.00359 \frac{1}{\text{day}}$	
Source Decay Rate	$\gamma := 0.000468 \frac{1}{\text{day}}$	
Soil sorption coefficient (EPA, 1990)	$K_{oc} := 79. \frac{\text{mL}}{\text{gm}}$	
Bulk density (Freeze and Cherry, 1979)	$\rho_b := 1.596 \frac{\text{gm}}{\text{cm}^3}$	
Organic carbon content	$f_{oc} := 0.06 \%$	
Retardation coefficient	$R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$	$R = 1.252$

Groundwater Hydraulics Calculations

Groundwater velocity (pore-water)	$v_x := \frac{K \cdot I}{n_e}$	$v_x = 0.125 \frac{\text{ft}}{\text{day}}$
Contaminant velocity	$v_c := \frac{v_x}{R}$	$v_c = 0.1 \frac{\text{ft}}{\text{day}}$
Longitudinal dispersion coefficient	$D_x := \alpha_x \cdot v_x$	$D_x = 1.025 \frac{\text{ft}^2}{\text{day}}$

Initial Plume Distribution Calculation

year := 365-day i := 1..100

x := 850-ft

$\Delta t := 1\text{-year}$

$ug := \frac{mg}{1000}$

$t_i := \Delta t \cdot i$

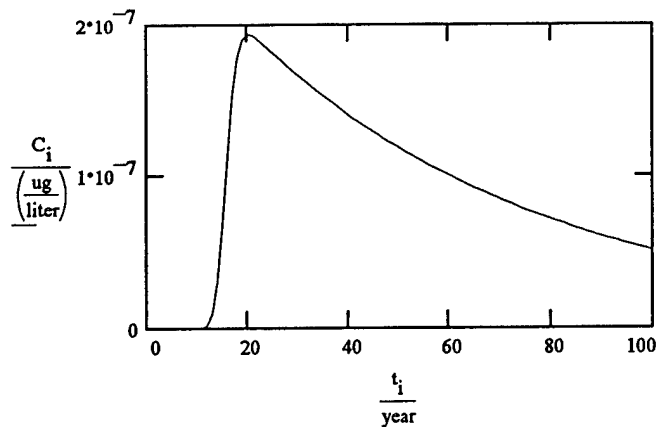
For Retarded Flow with Biodegradation and a Decaying Source (van Genuchten and Alves, 1982)

$$C_i := C_0 \cdot \exp(-\lambda \cdot t_i) \cdot \left[1 - \frac{1}{2} \left(1 - \operatorname{erf} \left(\frac{R \cdot x - v_x \cdot t_i}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right) - \frac{v_x^2 \cdot t_i}{\pi \cdot D_x \cdot R} \cdot \exp \left[-\frac{(R \cdot x - v_x \cdot t_i)^2}{4 \cdot D_x \cdot R \cdot t_i} \right] + \frac{1}{2} \left(1 + \frac{v_x \cdot x}{D_x} + \frac{v_x^2 \cdot t_i}{D_x \cdot R} \right) \cdot \exp \left(\frac{v_x \cdot x}{D_x} \right) \cdot \left(1 - \operatorname{erf} \left(\frac{R \cdot x + v_x \cdot t_i}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right] \dots$$

$$+ C_s \cdot \exp(-\gamma \cdot t_i) \cdot \left[\frac{v_x}{v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \cdot \exp \left[\frac{v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \cdot x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf} \left(\frac{R \cdot x - t_i \cdot v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right] \dots \right.$$

$$+ \left[\frac{v_x}{v_x - v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}} \cdot \exp \left[\frac{v_x + v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)} \cdot x}{2 \cdot D_x} \right] \cdot \left[1 - \operatorname{erf} \left(\frac{R \cdot x + t_i \cdot v_x \cdot \sqrt{1 + \frac{4 \cdot D_x \cdot R}{v_x^2} \cdot (\lambda - \gamma)}}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right] \dots \right.$$

$$\left. + \frac{v_x^2}{2 \cdot D_x \cdot R \cdot (\lambda - \gamma)} \cdot \exp \left[\frac{v_x \cdot x}{D_x} - (\lambda - \gamma) \cdot t_i \right] \cdot \left(1 - \operatorname{erf} \left(\frac{R \cdot x + v_x \cdot t_i}{2 \sqrt{D_x \cdot R \cdot t_i}} \right) \right) \right]$$



TRANSPORT SIMULATION OF BTEX AT THE SEYMOUR JOHNSON AFB FORMER AGE FUELING SITE USING A ONE-DIMENSIONAL SOLUTE TRANSPORT MODEL (Foc = 0.06%)

Hydrogeologic Data

Hydraulic conductivity	$K := 2.646 \cdot 10^{-3} \cdot \frac{\text{cm}}{\text{sec}}$	$K = 7.5 \cdot \frac{\text{ft}}{\text{day}}$
Hydraulic gradient	$I := 0.005 \cdot \frac{\text{ft}}{\text{ft}}$	
Effective porosity	$n_e := 0.3$	
Total porosity	$n := 0.3$	
Longitudinal dispersivity	$\alpha_L := 2.4995 \cdot \text{m}$	$\alpha_L = 8.2 \cdot \text{ft}$

Retardation Coefficient Calculation

Organic carbon partition coefficient (EPA, 1990)	$K_{oc} := 79 \cdot \frac{\text{mL}}{\text{gm}}$	
Particle mass density (Freeze and Cherry, 1979)	$\rho_s := 2.28 \cdot \frac{\text{gm}}{\text{cm}^3}$	
Bulk density (Freeze and Cherry, 1979)	$\rho_b := \rho_s \cdot (1 - n)$	$\rho_b = 1.596 \cdot \frac{\text{gm}}{\text{cm}^3}$
Organic carbon fraction content	$f_{oc} := 0.06\%$	
Retardation coefficient	$R := 1 + \frac{\rho_b \cdot K_{oc} \cdot f_{oc}}{n}$	
	$R = 1.252$	

Groundwater Hydraulics Calculations

Groundwater velocity (Darcy)	$v_d := K \cdot I$	$v_d = 0.038 \cdot \frac{\text{ft}}{\text{day}}$
Groundwater velocity (pore-water)	$v_p := \frac{v_d}{n_e}$	$v_p = 0.125 \cdot \frac{\text{ft}}{\text{day}}$
Constituent velocity	$v_c := \frac{v_p}{R}$	$v_c = 0.1 \cdot \frac{\text{ft}}{\text{day}}$
Longitudinal dispersion coefficient	$D_L := \alpha_L \cdot v_c$	$D_L = 0.819 \cdot \frac{\text{ft}^2}{\text{day}}$

Initial Plume Distribution Calculation

Constituent concentration at source location (MW-13)

$$C_{\text{source}} := 1.38 \cdot 10^{-2} \frac{\text{gm}}{\text{liter}}$$

Idealized length of the constituent plume (assumed) $L := 50 \text{ ft}$

Time required to form a plume of length, L, and source (maximum) concentration, C_{source} (Fischer, 1979)

$$\tau := \frac{\left(\frac{L}{6}\right)^2}{2 \cdot D_L} \quad \tau = 42.413 \cdot \text{day}$$

Distance required to form a plume of length, L, and source (maximum) concentration, C_{source}

$$\delta := v_c \cdot \tau \quad \delta = 4.234 \cdot \text{ft}$$

Idealized mass introduced per unit area (saturated thickness by width of porous media)

$$M := C_{\text{source}} \cdot n \cdot \sqrt{4 \cdot \pi \cdot D_L \cdot \tau} \quad M = 0.002 \cdot \frac{\text{kg}}{\text{ft}^2}$$

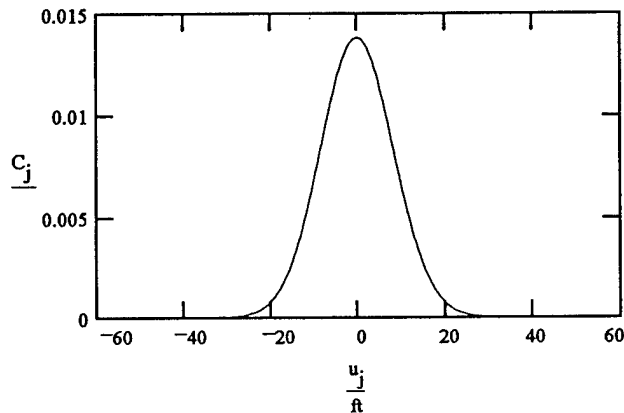
Spatial limits for the graph of initial constituent distribution

$$\begin{aligned} \Delta x &:= \frac{2 \cdot L}{200} & j &:= 1..201 \\ x_j &:= \Delta x \cdot j - (L + \Delta x - \delta) \\ u_j &:= x_j - \delta \end{aligned}$$

One-dimensional advective-dispersive solute transport solution (Bear, 1979)

$$C_j := \frac{M}{n \cdot \sqrt{4 \cdot \pi \cdot D_L \cdot \tau}} \cdot \exp \left[-\frac{(x_j - v_c \cdot \tau)^2}{4 \cdot D_L \cdot \tau} \right]$$

INITIAL CONSTITUENT DISTRIBUTION (Concentration vs. Distance where $u=0$ represents the actual location of the constituent source)



Constituent Arrival at Drainage Creek

Distance from the source (MW-13) to the receptor

$$d_r := 850 \text{ ft}$$

$$d_r = 259.08 \text{ m}$$

Temporal limits of arrival curve graph at the receptor location

$$j := 1..7500$$

$$\Delta T := 2 \text{ day}$$

$$T_j := j \cdot \Delta T$$

Transformation of time and distance scales to include initial plume distribution

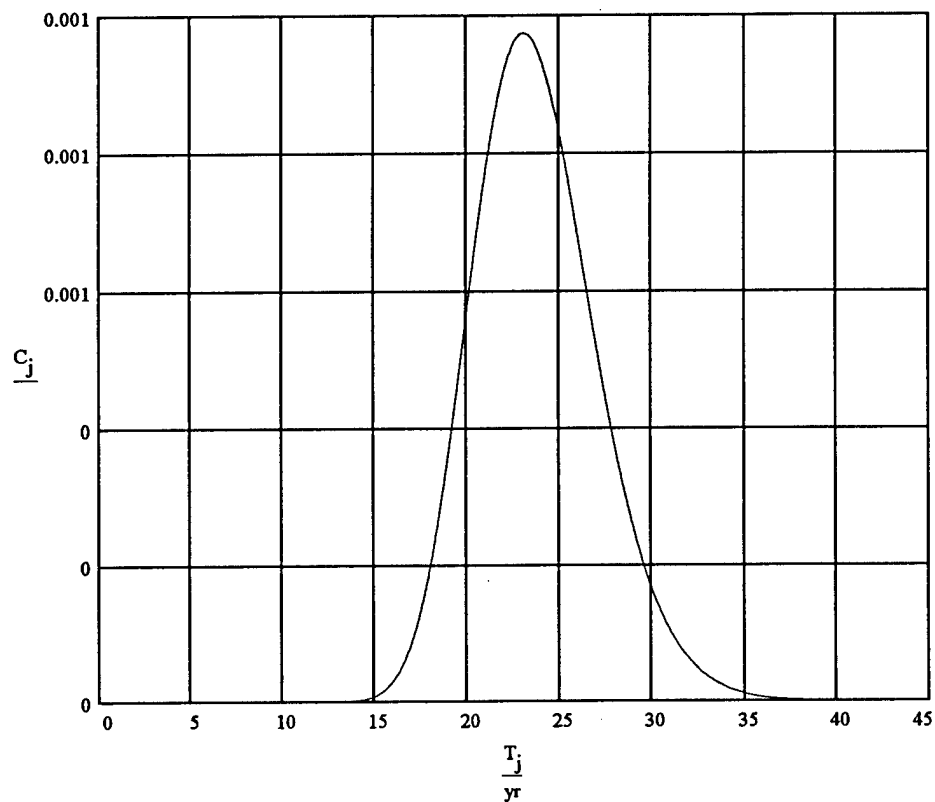
$$x := \delta + d_r$$

$$t_j := \tau + T_j$$

One-dimensional advective-dispersive solute transport solution (Bear, 1979)

$$C_j := \frac{M}{n \sqrt{4 \pi D L t_j}} \cdot \exp \left[-\frac{(x - v_c t_j)^2}{4 D L t_j} \right]$$

ARRIVAL OF BTEX AT CREEK



Peak Concentration and Peak Arrival Time Calculations

The peak arrival time is calculated by setting the time derivative of the 1-D solute transport solution (Bear, 1979) to zero and solving for the time variable.

Initial estimate for arrival of peak at the receptor $t_a := \frac{d}{v_c}$

Given

$$0 = \frac{\text{gm}}{\text{liter} \cdot \text{day}} \cdot \frac{1}{4} \cdot \frac{M}{\left[n \cdot \left[\sqrt{\pi} \cdot \left[\sqrt{D_L \cdot t_a} \cdot \left(\frac{3}{2} \right) \right] \right] \right]} \cdot \exp \left[\frac{-1}{4} \cdot \frac{(x - v_c t_a)^2}{(D_L \cdot t_a)} \right] \dots$$

$$+ \frac{1}{2} \cdot \frac{M}{\left[n \cdot \left[\sqrt{\pi} \cdot \left(\sqrt{D_L} \cdot \sqrt{t_a} \right) \right] \right]} \cdot \left[\frac{1}{2} \cdot \frac{(x - v_c t_a)}{(D_L \cdot t_a)} \cdot v_c + \frac{1}{4} \cdot \frac{(x - v_c t_a)^2}{(D_L \cdot t_a^2)} \right] \cdot \exp \left[\frac{-1}{4} \cdot \frac{(x - v_c t_a)^2}{(D_L \cdot t_a)} \right]$$

$$t_p := \text{find}(t_a)$$

Peak arrival time at Creek

$$t_{\text{peak}} := t_p - \tau$$

$$t_{\text{peak}} = 23.087 \cdot \text{yr}$$

Peak concentration at Creek

$$C_{\text{peak}} := \frac{M}{n \cdot \sqrt{4 \cdot \pi \cdot D_L \cdot t_p}} \cdot \exp \left[-\frac{(x - v_c t_p)^2}{4 \cdot D_L \cdot t_p} \right]$$

$$C_{\text{peak}} = 9.739 \cdot 10^{-4} \cdot \frac{\text{gm}}{\text{liter}}$$

$$\text{ppb} := C_{\text{peak}} \cdot 10^6$$

$$\text{ppb} = 973.907 \cdot \text{kg} \cdot \text{m}^{-3}$$

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Fischer, H. B., et al, Mixing in Inland and Coastal Waters, Academic Press, 1979.

Freeze, R. A. and J. A. Cherry, Groundwater, Prentice-Hall, 1979.

APPENDIX F

COSTING WORKSHEETS AND PRESENT WORTH CALCULATIONS

Present Worth Analysis

Annual Inflation Factor = 7%

Alternative 1: Continued Mobile LNAPL Removal, Intrinsic Remediation, and Institutional Controls with LTM	years	Present Worth (\$)	Cost (\$) at Year Indicated				
			Year: 1 2 3 4 5				
LNAPL Recovery							
LNAPL Recovery System Install	1	\$55,382	\$59,259	\$0	\$0	\$0	
Monthly Site Work	3	\$46,765	\$17,820	\$17,820	\$0	\$0	
Base Support/System Monitoring	3	\$13,122	\$5,000	\$5,000	\$0	\$0	
Annual Reports	3	\$6,647	\$2,533	\$2,533	\$0	\$0	
Subtotal Present Worth (\$)		\$121,917					
Maintain Institutional Controls	15	\$22,770	\$2,500	\$2,500	\$2,500	\$2,500	
Long-term Monitoring							
Install New POC Wells	1	\$8,294	\$8,875	\$0	\$0	\$0	
Annual Sampling	15	\$56,560	\$6,210	\$6,210	\$6,210	\$6,210	
Annual Reporting	15	\$30,065	\$3,301	\$3,301	\$3,301	\$3,301	
Subtotal Present Worth (\$)		\$117,690					

Total Present Worth Cost (\$):

\$239,606

[illegible]

Present Worth Analysis

Annual Inflation Factor = 7%

Alternative 2: Continued Mobile LNAPL Removal, Bioslurping/Bioventing in the Source Area Intrinsic Remediation, and Institutional Controls with LTM	years	Present Worth (\$)	Year: 1					Cost (\$) at Year Indicated				
			1	2	3	4	5	2	3	4	5	
Bioslurping/Bioventing System Design, Installation, and Operation (5 years)	Develop Work Plan	1	\$6,513	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Install Test Wells, Conduct Pilot	1	\$18,234	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Design System	1	\$11,233	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Prepare Bid Package	1	\$4,878	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Install System	1	\$127,238	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Bioslurping Annual Costs (yrs 1, 2)	2	\$103,580	\$57,289	\$0	\$0	\$0	\$8,528	\$8,528	\$8,528	\$8,528	\$0
	Bioventing Annual Costs (yrs 3, 4)	3	\$19,548	\$0	\$0	\$0	\$0	\$5,000	\$5,000	\$0	\$0	\$0
	Base Support/System Monitoring	5	\$20,501	\$5,000	\$5,000	\$5,000	\$5,000	\$5,118	\$5,118	\$5,118	\$5,118	\$5,118
	PM/Reporting Annual Costs	5	\$20,985	\$5,118	\$5,118	\$5,118	\$5,118	\$5,118	\$5,118	\$5,118	\$5,118	\$5,118
	Costs											
Subtotal Present Worth (\$)			\$332,708									
Maintain Institutional Controls	10		\$17,559	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Long-term Monitoring	Install New POC Wells	1	\$8,294	\$8,875	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Annual Sampling	10	\$43,616	\$6,210	\$6,210	\$6,210	\$6,210	\$6,210	\$6,210	\$6,210	\$6,210	\$6,210
	Annual Reporting	10	\$23,185	\$3,301	\$3,301	\$3,301	\$3,301	\$3,301	\$3,301	\$3,301	\$3,301	\$3,301
Subtotal Present Worth (\$)			\$92,655									

Total Present Worth Cost (\$):

\$425,363

Cost (\$) at Year Indicated										
6	7	8	9	10	11	12	13	14	15	16

\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$6,210	\$6,210	\$6,210	\$6,210	\$6,210	\$0	\$0	\$0	\$0	\$0	\$0
\$3,301	\$3,301	\$3,301	\$3,301	\$3,301	\$0	\$0	\$0	\$0	\$0	\$0

Present Worth Analysis

Annual Inflation Factor = 7%

Alternative 3: Soil Excavation in the LNAPL Area, combined with Bioventing at the fringes of the Source Area, Intrinsic Remediation and Institutional Controls with LTM	years	Present Worth (\$)	Cost (\$) at Year Indicated					
			Year: 1 2 3 4 5					
Soil Excavation, Bioventing System Design, Installation, and Operation	Develop Work Plan	1	\$6,513	\$6,969	\$0	\$0	\$0	\$0
	Install Test Wells, Conduct Pilot	1	\$12,467	\$13,340	\$0	\$0	\$0	\$0
	Design System	1	\$11,233	\$12,019	\$0	\$0	\$0	\$0
	Prepare Bid Package	1	\$4,878	\$5,219	\$0	\$0	\$0	\$0
	Soil Excavation/Install System	1	\$129,379	\$138,435	\$0	\$0	\$0	\$0
	Bioventing Annual Costs	3	\$22,380	\$8,528	\$8,528	\$8,528	\$0	\$0
	Base Support/System Monitoring	3	\$13,122	\$5,000	\$5,000	\$5,000	\$0	\$0
	PM/Annual Reporting	3	\$13,431	\$5,118	\$5,118	\$5,118	\$0	\$0
			\$213,402					
Maintain Institutional Controls	8	\$14,928	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	
Long-term Monitoring								
	Install New POC Wells	1	\$8,294	\$8,875	\$0	\$0	\$0	\$0
	Annual Sampling	8	\$37,082	\$6,210	\$6,210	\$6,210	\$6,210	\$6,210
	Annual Reporting	8	\$19,711	\$3,301	\$3,301	\$3,301	\$3,301	\$3,301
Subtotal Present Worth (\$)			\$80,016					

Total Present Worth Cost (\$):

\$293,418

Cost (\$) at Year Indicated										
6	7	8	9	10	11	12	13	14	15	16

\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

\$2,500	\$2,500	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$6,210	\$6,210	\$6,210	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$3,301	\$3,301	\$3,301	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Alternative 1: LNAPL Recovery

Standard Rate Schedule

Billing Category Cost Code/(Billing Category)	Billing Rate	Task 1 (hrs)	Install Recovery Sys (\$)	Task 2 (hrs)	Monthly Site Work (\$)	Task 3 (hrs)	Annual Reports (\$)
Word Processor 88/(15)	\$30	8	\$240	0	\$0	4	\$120
CADD Operator 58/(25)	\$47	16	\$752	0	\$0	8	\$376
Technician 42/(50)	\$40	40	\$1,600	144	\$5,760	0	\$0
Staff Level 16/(65)	\$57	60	\$3,420	0	\$0	20	\$1,140
Project Level 12/(70)	\$65	60	\$3,900	24	\$1,560	8	\$520
Senior Level 10/(80)	\$85	4	\$340	0	\$0	0	\$0
Principal 02/(85)	\$97	1	\$97	0	\$0	1	\$97
Total Labor (hrs \$)		189	\$10,349	168	\$7,320	41	\$2,253
ODCs							
Phone			\$60		\$60		\$20
Photocopy			\$50		\$20		\$40
Mail/Shipping			\$200		\$240		\$20
Computer			\$100		\$0		\$100
CAD			\$160		\$0		\$80
WP			\$40		\$0		\$20
Travel			\$1,300		\$2,280		\$0
Eqpt. & Supplies			\$500		\$1,200		\$0
Total ODCs			\$2,410		\$3,800		\$280
Outside Services							
Recovery System Installation			\$46,500		\$0		\$0
Product Hauling/Disposal (\$1,500/load of 7,000 gallon)			\$0		\$6,000		\$0
Electrical Costs			\$0		\$500		\$0
Laboratory Fees			\$0		\$200		\$0
Other			\$0		\$0		\$0
Total Outside Services			\$46,500		\$6,700		\$0

Proposal Estimate	Task 1	Task 2	Task 3
Labor	\$10,349	\$7,320	\$2,253
ODC's	\$2,410	\$3,800	\$280
Outside Services	\$46,500	\$6,700	\$0
Total by Task	\$59,259	\$17,820	\$2,533
Total Labor	\$19,922		
Total ODCs	\$6,490		
Total Outside Services	\$53,200		
Total Project	\$79,612		

Task 1: LNAPL Recovery System Design and Construction

Task 2: Monthly Site Time and Travel Costs (per year)

Task 3: Report Preparation and Product Disposal

Alternatives 1, 2, and 3: Long-Term Monitoring

Standard Rate Schedule

Billing Category Cost Code/(Billing Category)	Billing Rate	Task 1 (hrs)	Install New POC Wells (\$)	Task 2 (hrs)	Annual Sampling (\$)	Task 3 (hrs)	Annual Reporting and PM (\$)
Word Processor 88/(15)	\$30	0	\$0	0	\$0	8	\$240
CADD Operator 58/(25)	\$47	0	\$0	0	\$0	4	\$188
Technician 42/(50)	\$40	5	\$200	24	\$960	0	\$0
Staff Level 16/(65)	\$57	50	\$2,850	20	\$1,140	24	\$1,368
Project Level 12/(70)	\$65	4	\$260	4	\$260	16	\$1,040
Senior Level 10/(80)	\$85	1	\$85	0	\$0	2	\$170
Principal 02/(85)	\$97	0	\$0	0	\$0	0	\$0
Total Labor (hrs \$)		60	\$3,395	48	\$2,360	54	\$3,006
ODCs							
Phone			\$20		\$10		\$20
Photocopy			\$10		\$10		\$50
Mail			\$50		\$50		\$25
Computer			\$0		\$0		\$60
CAD			\$0		\$0		\$100
WP			\$0		\$0		\$40
Travel			\$560		\$580		\$0
Eqpt. & Supplies			\$500		\$200		\$0
Total ODCs			\$1,140		\$850		\$295
Outside Services							
Drilling Cost (4 wells to @ \$45/ft) + move			\$3,900		\$0		\$0
			\$0		\$0		\$0
			\$0		\$0		\$0
Laboratory Fees (BTEx/TVH), \$150ea, 2 sets/yr		soil	\$440	6 LTM, 4 POC, 2qa/qc	\$3,000		\$0
Other: Maintain Institutional Controls			\$0		\$0		\$0
Total Outside Services			\$4,340		\$3,000		\$0

Proposal Estimate	Task 1	Task 2	Task 3
Labor	\$3,395	\$2,360	\$3,006
ODC's	\$1,140	\$850	\$295
Outside Services	\$4,340	\$3,000	\$0
Total by Task	\$8,875	\$6,210	\$3,301
Total Labor	\$8,761		
Total ODCs	\$2,285		
Total Outside Services	\$7,340		
Total Project	\$18,386		

Task 1: Install New POC Wells

Task 2: Annual Sampling

Task 3: Annual Reporting and PM

Alternative 2: Bioslurping/Bioventing System Design and Installation

Standard Rate Schedule

Billing Category	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	PM/Report
Cost Code/(Billing Category)	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
Word Processor 88/(15)	30								
CAD Operator 58/(25)	47								
Technician 42/(50)	40								
Staff Level 16/(65)	57								
Project Level 12/(70)	65								
Senior Level 10/(80)	85								
Principal 02/(85)	97								
Total Labor (hrs) (\$)	116	214	207	87	220	445	67	83	\$4,523
ODCs									
Phone									
Photocopy									
Mail/Shipping									
Computer									
CAD									
WP									
Travel									
Eqpt. & Supplies									
Total ODCs									
Outside Services									
Drilling Cost									
Electrical Costs									
Natural Gas Costs									
Laboratory Fees									
Construction Costs									
Total Outside Services									

Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8
Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8
Proposal Estimate							
Labor							
ODC's							
Outside Services							
Total by Task							
Total Labor							
Total ODCs							
Total Outside Services							
Total Project							

- Task 1: Work Plan Development
- Task 2: Bioslurping/Bioventing Pilot Study
- Task 3: Design
- Task 4: Prepare and Solicit Bids
- Task 5: System Installation
- Task 6: Bioslurping System Operation, Maintenance, Annual Monitoring, and Project Management
- Task 7: Bioventing System Operation, Maintenance, Annual Monitoring, and Project Management
- Task 8: Annual Report/Project Management

Alternative 3: Soil Excavation in LNAPL Area with Bioventing at Plume Fringes System Design and Installation

Standard Rate Schedule

Billing Category	Cost Code (Billing Category)	Rate	Task 1	Work Plan (\$)	Task 2	Pilot Studies (\$)	Task 3	Design (\$)	Task 4	Bid (\$)	Task 5	Excavation/Installation (\$)	Task 6	Bioventing Annual Costs (\$)	Task 7	Bioventing Annual Costs (\$)
Word Processor	88/(15)	\$30	20	\$600	0	\$0	40	\$1,200	20	\$600	5	\$150	0	\$0	8	\$240
CADD Operator	58/(25)	\$47	10	\$470	0	\$0	40	\$1,880	0	\$0	0	\$0	0	\$0	8	\$376
Technician	42/(50)	\$40	0	\$0	40	\$1,600	0	\$0	0	\$0	80	\$3,200	0	\$0	8	\$320
Staff Level	16/(65)	\$57	60	\$3,420	40	\$2,280	80	\$4,560	40	\$2,280	80	\$4,560	48	\$2,736	40	\$2,280
Project Level	12/(70)	\$65	20	\$1,300	20	\$1,300	40	\$2,600	20	\$1,300	40	\$2,600	16	\$1,040	16	\$1,040
Senior Level	10/(80)	\$85	4	\$340	4	\$340	5	\$425	5	\$425	10	\$850	2	\$170	2	\$170
Principal	02/(85)	\$97	2	\$194	0	\$0	2	\$194	2	\$194	5	\$485	1	\$97	1	\$97
Total Labor (hrs/\$)			116	\$6,324	104	\$5,520	207	\$10,859	87	\$4,799	220	\$11,845	67	\$4,043	83	\$4,523
ODC's																
Phone		\$20				\$20		\$20		\$20		\$40		\$20		\$60
Photocopy		\$30				\$30		\$30		\$30		\$60		\$30		\$90
Mail		\$45				\$45		\$45		\$45		\$90		\$45		\$135
Computer		\$200				\$200		\$200		\$200		\$400		\$200		\$800
CAD		\$150				\$150		\$150		\$150		\$300		\$150		\$450
WP		\$200				\$200		\$200		\$200		\$400		\$200		\$600
Travel		\$0				\$1,100		\$1,100		\$1,100		\$2,200		\$1,100		\$3,300
Egpt. & Supplies		\$0				\$600		\$600		\$600		\$1,200		\$600		\$1,800
Total ODCs				\$645		\$1,720		\$1,160		\$420		\$2,340		\$1,660		\$595
Outside Services																
Drilling Cost		\$0			1-VW, 3	\$5,000		\$0		\$0	7 VWs,	\$21,250		\$0		\$0
Electrical Costs		\$0				\$0		\$0		\$0	1,000 y	\$50,000		\$325		\$0
Soil Excavation		\$0				\$0		\$0		\$0		\$12,000		\$0		\$0
Soil Disposal		\$0				\$1,100		\$0		\$0		\$11,000		\$2,500		\$0
Laboratory Fees		\$0				\$0		\$0		\$0		\$30,000		\$0		\$0
Bioventing Construction Costs		\$0				\$0		\$0		\$0		\$124,250		\$2,825		\$0
Total Outside Services				\$0		\$6,100		\$0		\$0		\$124,250		\$2,825		\$0

Proposal Estimate	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7
Labor	\$6,324	\$5,520	\$10,859	\$4,799	\$11,845	\$4,043	\$4,523
ODC's	\$645	\$1,720	\$1,160	\$420	\$2,340	\$1,660	\$595
Outside Services	\$0	\$6,100	\$0	\$0	\$124,250	\$2,825	\$0
Total by Task	\$6,969	\$13,340	\$12,019	\$5,219	\$138,435	\$8,528	\$5,118
Total Labor	\$43,390						
Total ODCs	\$7,945						
Total Outside Services	\$133,175						
Total Project	\$184,510						

- Task 1: Work Plan Development
- Task 2: Bioventing Pilot Study
- Task 3: Design
- Task 4: Prepare and Solicit Bids
- Task 5: Soil Excavation / Bioventing System Installation
- Task 6: Bioventing System Operation, Maintenance, and Annual Monitoring
- Task 7: Project Management/Annual Reporting

Seymour Johnson AFB Backup Calculations

Misc calculations

Recovery System

Number of LNAPL recovery wells: 2,400 sq ft
 Area to be covered: 15 ft
 Well radius of influence: 707 sq ft
 Area of influence: 3
 Number of wells: 20 ft
 Depth each:
 Trench Volume/Area
 Width: 12 in
 Depth: 4 ft
 Length: 500 ft
 Volume: 2,000 cf
 Surface Area: 74 cy
 500 sf
 56 sy

Concrete Volume/Area

Length: 100 lf
 Width: 6 in
 Thickness: 6 in
 Volume: 25 cf
 Area: 1 cy
 50 sf
 6 sy

Groundwater Treatment

Groundwater treatment wells

Number: - ft
 Depth: -

Trench Volume/Area

Width: - in
 Depth: - ft
 Length: - ft
 Volume: - cf
 Surface Area: - cy
 - sf
 - sy

Cost calculations

Recovery System Installation

Description	Unit	Quantity	Unit Price	Subtotal	Total
Well Installation	ea	1	\$ 300	\$ 300	3,400
Mobilization	ln ft	60	\$ 45	\$ 2,700	
Soil Disposal	drum	4	\$ 100	\$ 400	
Trenching/Piping	ea	1	\$ 1,000	\$ 1,000	13,316
Mob/Demob	ln ft	100	\$ 18.80	\$ 1,880	
Concrete Cutting	cy	74	\$ 5.05	\$ 374	Means 020 728 0420
Pipe laying	ln ft	600	\$ 13.05	\$ 7,830	Means 022 254 0050
Backfill	cy	74	\$ 17.20	\$ 1,273	Means 151 701 0550/026 686 2800
Compaction	cy	74	\$ 5.10	\$ 377	Means 022 204 0600
Pavement Base	sy	56	\$ 5.25	\$ 294	Means 022 204 0600
Concrete repair	cy	1	\$ 97.00	\$ 97	Means 022 308 0100
Reseeding	sy	100	\$ 1.91	\$ 191	Means 033 130 4700

System Installation

Description	Unit	Quantity	Unit Price	Subtotal	Total
Skimmers	ea	10	\$ 500	\$ 5,000	29,775
Compressors	ea	2	\$ 3,000	\$ 6,000	WAG
Tank	ea	1	\$ 5,725	\$ 5,725	Colonial Quotes
Piping	lf	250	\$ 9.30	\$ 2,325	Means 132 151 5540
Mechanical	man hr	80	\$ 38.83	\$ 3,106	Means 151 551 1880
Electrical	ls	1	\$ 2,500	\$ 2,500	Means Q-1 crew
Slab	cy	2	\$ 97.00	\$ 194	WAG
Building	ea	1	\$ 4,925	\$ 4,925	Means 033 130 4700

Recovery System Installation Total

\$ 46,491

Groundwater Treatment System

Description	Unit	Quantity	Unit Price	Subtotal	Total
Well Installation	ea	-	\$ 1,000	\$ -	-
Mobilization	ln ft	-	\$ 45	\$ -	-
Well Installation	ln ft	-	\$ 45	\$ -	-
Soil Disposal	drum	-	\$ 100	\$ -	-
Trenching/Piping	ea	-	\$ 1,000	\$ -	-
Mob/Demob	cy	-	\$ 5.05	\$ -	-
Pipe laying	ln ft	-	\$ 13.05	\$ -	-
Backfill	cy	-	\$ 17.20	\$ -	-
Compaction	cy	-	\$ 5.10	\$ -	-
Reseeding	sy	-	\$ 1.91	\$ -	-
System Installation	ea	-	\$ 700	\$ -	-
Pumps	ea	-	\$ 20,000	\$ -	-
Air Stripper	ea	-	\$ 9.30	\$ -	-
Piping	man hr	-	\$ 38.83	\$ -	-
Mechanical	ls	-	\$ 2,500	\$ -	-
Electrical	cy	-	\$ 97.00	\$ -	-
Slab	cy	-	\$ 97.00	\$ -	-
Building	ea	-	\$ 4,925	\$ -	-

Groundwater Treatment System

\$ -